

Pacific Gas and Electric Company

2010-2012 ENERGY EFFICIENCY
PORTFOLIO

Program Performance Metrics Report
Type 2a for Program Year 2012
Type 2b for Program Cycle 2010-2012

June 3, 2013



PACIFIC GAS AND ELECTRIC COMPANY
2010-2012 ENERGY EFFICIENCY PORTFOLIO
STATEWIDE PROGRAMS
Narratives for Reporting of
Program Performance Metric Type 2a for Program Year 2012 and
Metric Type 2b for Program Cycle 2010-2012
Submitted: June 3, 2013

PG&E submits the attached 2012 Program Program Metrics Report for PG&E's 2010-2012 Energy Efficiency Portfolio Statewide Programs and Subprograms, pursuant to Commission Decision 09-09-047 and Resolution E-4385. Resolution E-4385 approved Program Performance Metrics (PPMs) and requires annual reporting of metric type 2a and Subprograms, and end of cycle reporting of metric type 2b for certain Statewide Programs. Additional details for PG&E's metric performance are provided in separate metric table attachments, as referenced below and as indicated in the 2012 Joint IOU Master Program Performance Metrics Report.

Decision 09-09-047 also required IOUs to submit a narrative report to supplement the Program Performance Metrics Report. PG&E's narratives are submitted below, for program year 2012 progress for annual metrics (type 2a) and cumulative progress for program years 2010-2012 for program cycle metrics (type 2b).

COMMERCIAL – PGE 2101

The 2010-2012 Statewide Commercial Energy Efficiency Program offers strategic energy planning support, technical support (such as facility audits, calculation and design assistance), and financial support through rebates and incentives. This program focuses on promoting energy efficiency for commercial customers. Targeted segments include distribution warehouses, office buildings, hotels, motels, restaurants, schools, universities, colleges, hospitals, high-tech facilities, bio-tech facilities, retail facilities, entertainment centers, and smaller commercial customers that have similar buying characteristics.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-1	PGE2101	Number and percent (relative to all eligible customers) of commercial, industrial and agricultural customers participating in sub-programs (NRA, Deemed, Calculated, and CEI) by NAICS code, by size (+/- 200 kW per yr or +/- 50K therms per yr), and by hard to reach (HTR). ¹ <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a

¹ "HTR" is as defined in the EE Policy Manual.

Progress towards meeting program metric goals

CIA-1: Please see Excel file "CIA-1_PGE.xlsx" for Commercial Program Participation:

- 18,190 nonresidential audits were completed
- 7,446 Commercial participants in the Deemed Rebates program
- 689 Commercial participants in Calculated programs

In 2012 there were 27,205 Commercial participants, of which 3.58% were considered hard to reach.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

COMMERCIAL – Continuous Energy Improvement – PGE21013

The Commercial Continuous Energy Improvement (CEI) Program is a non-resource program which provides a toolkit of planning and other resources, including analysis, benchmarking, goal setting, project implementation support, performance monitoring, and energy management certification.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-2	PGE21013	Number and percent of commercial, industrial, and agricultural CEI participants that meet short-term (2010-2012) milestones as identified by their long term energy plans. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
CIA-3	PGE21013	Lessons learned, best practices, and plan to ramp up the CEI program are developed. (Y/N)	2b
CIA-4	PGE21013	Number and percent of commercial, industrial and agricultural customers that created an energy plan via CEI will be tracked by program. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a

Progress towards meeting program metric goals

The metric results reported for the CEI program are cumulative (2010-2012).

CIA-2: In 2012, two (2) out of the two (2) Commercial customers that continued with implementation of their Strategic Energy Management Plan (SEMP) are meeting their short term milestones, for a total of 100%.

CIA-3: PG&E's plans for the 2013-2014 program cycle include carrying out many of the recommendations raised by The Cadmus Group Inc. in the recently published process evaluation of the statewide CEI program. Many of the proposed recommendations have already been adopted by PG&E such as the cohort structure, built in off-ramps, and certification

flexibility. PG&E will continue to work with the statewide team to adopt key program improvement opportunities and will be launching a mid-sized pilot aimed to help customers make respective organizational adjustments for incorporating CEI into their daily business operations.

CIA-4: As of the end of 2012, two (2) Commercial customers, from a total of two (2) enrolled in CEI have established a SEMP, for a total of 100%.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

COMMERCIAL – Non-Residential Audits – PGE21014

The Commercial Non-Residential Audits Program offers basic audits, integrated audits, and retro-commissioning audits, which provide an inventory of technical project opportunities and financial analysis information.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-5	PGE21014	Number and percent of commercial, industrial, and agricultural customers receiving non-residential audits by NAICS and SIC code.	2b
CIA-6	PGE21014	For commercial, industrial, and agricultural customers who received audits, the number and percent of adopted audit-recommended technologies, processes and practices, (Report disaggregated data by type of audit - Basic, Integrated, and Retro-commissioning audit).** ⁽¹⁾ **Data sources for reporting will come from (a) program tracking databases and (b) process evaluation to refine estimates.	2b

Progress towards meeting program metric goals

CIA-5: The attached file, “CIA-5_PGE.xlsx” shows all non-residential audits separated by segment (Commercial, Industrial, Agriculture) and NAICS code.

Percentages at the NAICS-code level represent the percentage of total audits in a given NAICS code versus the total number of audits for that segment. For example, we conducted 511 audits for commercial supermarkets, which represents 2.19% of the total 23,306 commercial audits we performed.

Percentages at the segment level represent the number of total eligible customers in a segment versus how many audits we performed for that segment. For instance, we had 658,329 eligible Commercial customers, 23,306 of which received an audit in 2010-2012, for a percent served of 3.54%.

CIA-6: The attached file, “CIA-6_PGE.xlsx” shows all audit conversion separated by segment (Commercial, Industrial, Agriculture) and Audit type (Basic, Integrated, RCx). Audit conversion is defined as a customer receiving an audit in 2010-2012 followed by the customer taking a database-tracked action in 2010-2012.

Basic and Integrated Audit conversion takes time. Audits are an initial step followed by multiple other resources to help the customer implement projects. As a result, many of the 2012 audits, and even some of the 2011 audits, have not yet been converted.

RCx Audits are implemented differently than our Basic and Integrated Audits. RCx Audits are delivered specifically as part of the RCx program defined process and are thus explicitly connected to implementation of the RCx project. This leads to conversion of 80-100%.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

COMMERCIAL – Deemed – PGE21012

The Commercial Deemed Incentives Program offers rebates to customers in an easy to use mechanism to offset the cost of off-the-shelf energy saving equipment.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-7	PGE21012	<p>Number and percent of new, improved, or ETP measures installed in the commercial, industrial and agricultural programs.</p> <p><u>Note:</u></p> <ul style="list-style-type: none"> • Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural) • “ETP measure” defined as ET measures first introduced into the EE portfolio since January 1, 2006 	2a
COMM-1	PGE21012	<p>Number and percent of participating commercial customers receiving the “Integrated Bonus.”**</p> <p>** “Integration Bonus” is an incentive mechanism to promote greater integration of DSM resources, available to customers who (a) sign up or are already signed up for a DSM program, and (b) purchase, install, and/or are eligible to receive a rebate for an energy saving device.</p>	2b

Progress towards meeting program metric goals

CIA-7: In 2012, the IOUs continued to identify “new,” “improved,” or Emerging Technologies Program (ETP) deemed measures as previously established in 2011. New, improved and ETP measures include those installed and paid in 2012 with no installation or payment history in 2006-2009.

The IOUs further agreed to report the total installation occurrences for each of these measures by number of paid applications in 2012.

In 2012, PG&E had 79 occurrences of new, improved or ETP measures paid, out of 7,630 total occurrences, representing 1.0% of overall deemed applications paid in the Commercial segment in 2012.

COMM-1: The purpose of the integrated bonus was to promote greater DSM measures. In the 2010-2012 program cycle, PG&E decided not to launch the integrated bonus in the Deemed subprogram sector after it was determined there were more effective ways to support integrated projects. However, the IOUs have addressed DSM opportunities where possible from an integrated approach.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

COMMERCIAL – Calculated Incentives – PGE21011

The Calculated Incentives subprogram offers incentives for customized new construction, retrofit, and retro-commissioning energy efficiency projects. Also provides comprehensive technical and design assistance.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-8	PGE21011	Number and percent of new, improved, or ETP measures installed in completed calculated projects. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
CIA-9	PGE21011	*Number, percent, and ex-ante savings from commercial, industrial and agricultural sector of projects with ETP measures** included. (Report disaggregated savings by measure and number of installations by measure.) ** “ETP measure” defined as ET measures first introduced into the EE portfolio since January 1, 2006	2b

Progress towards meeting program metric goals

CIA-8: Calculated projects often lead to ad-hoc solutions that require a new and project-specific approach. Unlike deemed measures, a manual review of all calculated projects by staff would have been required. While such a review is possible, the results are highly subjective, making comparison of PPM results among the IOUs very challenging. By the end of 2012, PG&E had not yet developed a robust tracking mechanism for identifying “new or improved” calculated measures. PG&E’s PPM results, therefore, reflect only ETP measures introduced since 2010.

In 2012, 74 of 1,117 total Calculated measure occurrences were ETP measures. ETP measures represented 6.6% of all Calculated measure applications paid for the Commercial segment in 2012.

CIA-9: During the 2010-2012 program cycle, PG&E completed 2,325 calculated projects within the Commercial segment, 171 or 7% of those projects included ETP measures. Of the ex-ante savings captured for all calculated projects during the cycle (13,000,000 kWh electrical usage savings and 904 kW electrical demand savings), 62% of the total electrical usage savings and 46% of the total electrical demand savings came from the installation of ETP measures.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

COMMERCIAL – Direct Install – PGE2101

The Commercial Direct Install Program is designed to deliver free and/or lowest cost energy efficiency hardware retrofits, through installation contractors, to reduce peak demand and energy savings for commercial customers with monthly demand of typically less than 200 kW.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
COMM-2.1	PGE2101	Number of Direct Install participants that participate in other resource programs or OBF.	2a
COMM-2.2	PGE2101	Percent of Direct Install participants that participate in other resource programs or OBF.	2a
COMM-3.1	PGE2101	Number of participants that are hard to reach (HTR).	2a
COMM-3.2	PGE2101	Percent of participants that are hard to reach (HTR).	2a

Progress towards meeting program metric goals

COMM-2.1 and COMM-2.2: In 2012, PG&E had 4,187 Direct Install participants. Of the participants, 461 participated in other resource programs or On-Bill Financing (OBF), representing 11% of Direct Install participants. In many instances, the Direct Install programs have a low cost “out-of-pocket” expense to the customer. OBF helps finance such projects, which contributes to the 11% participation rate. PG&E’s OBF program executed loan agreements and committed funds for 12 customers through the Direct Install program in 2012.

COMM-3.1 and COMM-3.2: Of the 4,187 participants, 1,243 were located in hard to reach areas, representing almost 30% of PG&E’s Direct Install participants.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

PG&E changed the criteria for the definition of a small to medium business customer. Previously, this customer was defined at below 200 kW at the meter level. However, moving forward the new definition will be based on customers below 200 kW at the aggregate meter level. This new definition was used for 2012 PPM data.

INDUSTRIAL – PGE2102

The Statewide Industrial Energy Efficiency Program partners with industry stakeholders to promote integrated energy management solutions to end use customers. The program offerings together are designed to not only overcome the traditional market barriers to energy efficiency, but also use efficiency to advance distributed generation (DG) and demand reduction (DR) opportunities. Customers from the industrial sector include printing plants, plastic injection molding facilities, component fabrication, lumber and paper mills, cement and quarries, metals processing, petroleum refineries, chemical industries, assembly plants, and water and wastewater treatment plants.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-1	PGE2102	Number and percent (relative to all eligible customers) of commercial, industrial and agricultural customers participating in sub-programs (NRA, Deemed, Calculated, and CEI) by NAICS code, by size (+/- 200 kW per yr or +/- 50K therms per yr), and by hard to reach (HTR). <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
IND-1.1	PGE2102	Number of first-time** participants in energy efficiency programs. (Report disaggregate data by sub-program) <u>Note:</u> "First time" means customer has not participated in energy efficiency programs since December 31, 2005.	2a
IND-1.2	PGE2102	Percent of first-time** participants in energy efficiency programs. (Report disaggregate data by sub-program) <u>Note:</u> "First time" means customer has not participated in energy efficiency programs since December 31, 2005.	2a

Progress towards meeting program metric goals

CIA-1: Please see Excel file "CIA-1_ PGE.xlsx" for Industrial Program Participation:

In 2012, there were 1,762 Industrial participants.

1,286 non-residential audits were completed (1,257 were small and 29 were large Industrial participants; 294 were HTR Customers).

403 Industrial participants in the Deemed Rebates program (334 were small and 69 were large Industrial participants; 61 were HTR Customers).

74 Industrial participants in Calculated programs (24 were small and 50 were large Industrial participants; 14 were HTR Customers).

IND-1.1, 1.2: PG&E's account representatives and partners constantly reach out to new customers to expand the impact of the energy efficiency programs. Utilities have used a variety of means to outreach their industrial customers including direct contacts through their account managers, partnering with industry specific associations, workshops, web based information and resources, and marketing collaterals including case studies and best practices.

In 2012, there were 1,667 first-time Industrial participants. These customers took advantage of the following program offerings:

- 39 participated in the Calculated program
- 359 participated in the Deemed Rebates program
- 1,270 participants completed a non-residential audit

In 2012, 94.4% of all Industrial participants were first time participants.

- 98.8% of Industrial customers that completed a non-residential audit were first time participants
- 88.4% of Industrial customers received Deemed incentives were first time participants
- 52.7% of Industrial customers that received Calculated incentives were first time participants

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

INDUSTRIAL – Continuous Energy Improvement – PGE21023

The Continuous Energy Improvement (CEI) subprogram is a non-resource program which provides a toolkit of planning and other resources, including analysis, benchmarking, goal setting, project implementation support, performance monitoring, and energy management certification.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-2	PGE21023	Number and percent of commercial, industrial, and agricultural CEI participants that meet short-term (2010-2012) milestones as identified by their long term energy plans. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
CIA-3	PGE21023	Lessons learned, best practices, and plan to ramp up the CEI program are developed. (Y/N)	2b
CIA-4	PGE21023	Number and percent of commercial, industrial and agricultural customers that created an energy plan via CEI will be tracked by program. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a

Progress towards meeting program metric goals

The metric results reported for the CEI program are cumulative (2010 to 2012).

CIA-2: Through 2012, four out of the five Industrial participants that continued with implementation of their SEMP are meeting their short term milestones.

CIA-3: PG&E's plans for the 2013-2014 program cycle include carrying out many of the recommendations raised by The Cadmus Group, Inc., in the recently published process evaluation of the statewide CEI program. Many of the proposed recommendations have already been adopted by PG&E such as the cohort structure, built in off-ramps, and certification

flexibility. PG&E will continue to work with the statewide team to adopt key program improvement opportunities, and will be launching a mid-sized pilot aimed to help customers make respective organizational adjustments for incorporating CEI into their daily business operations.

CIA-4: As of the end of 2012, all five Industrial participants out of the five enrolled in CEI have established a Strategic Energy Management Plan (SEMP).

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

INDUSTRIAL – Non-Residential Audits – PGE21024

The Industrial Non-Residential Audits Program offers basic audits, integrated audits, and retro-commissioning audits, which provide an inventory of technical project opportunities and financial analysis information.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-5	PGE21024	Number and percent of commercial, industrial, and agricultural customers receiving non-residential audits by NAICS and SIC code.	2b
CIA-6	PGE21024	For commercial, industrial, and agricultural customers who received audits, the number and percent of adopted audit-recommended technologies, processes and practices, (Report disaggregated data by type of audit - Basic, Integrated, and Retro-commissioning audit).** ⁽¹⁾ **Data sources for reporting will come from (a) program tracking databases and (b) process evaluation to refine estimates.	2b

Progress towards meeting program metric goals

CIA-5: The attached file, "CIA-5_PGE.xlsx" shows all non-residential audits separated by segment (Commercial, Industrial, Agriculture) and NAICS code.

Percentages at the NAICS-code level represent the percentage of total audits in a given NAICS code versus the total number of audits for that segment. For example, we conducted 135 audits for industrial machine shops, which represents 8.62% of the total 1,566 industrial audits we performed.

Percentages at the segment level represent the number of total eligible customers in a segment versus how many audits we performed for that segment. For instance, we had 64,311 eligible Industrial customers, 1,566 of which received an audit in 2010-2012, for a percent served of 2.44%.

CIA-6: The attached file, "CIA-6_PGE.xlsx" shows all audit conversion separated by segment (Commercial, Industrial, Agriculture) and Audit type (Basic, Integrated, RCx). Audit conversion is defined as a customer receiving an audit in 2010-2012 followed by the customer taking a database-tracked action in 2010-2012.

Basic and Integrated Audit conversion takes time. Audits are an initial step followed by multiple other resources to help the customer implement projects. As a result, many of the 2012 audits, and even some of the 2011 audits, have not yet been converted.

RCx Audits are implemented differently than our Basic and Integrated Audits. RCx Audits are delivered specifically as part of the RCx program defined process and are thus much closer in time to when the customer is implementing the RCx project. This leads to conversion of 80-100%.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

INDUSTRIAL – Deemed Incentives – PGE21022

The Industrial Deemed Incentives Program offers rebates to customers in an easy to use mechanism to offset the cost of off-the-shelf energy saving equipment.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-7	PGE21022	<p>Number and percent of new, improved, or ETP measures** installed in the commercial, industrial and agricultural programs.</p> <p><u>Note:</u></p> <ul style="list-style-type: none"> • Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural) • “ETP measure” defined as ET measures first introduced into the EE portfolio since January 1, 2006 	2a

Progress towards meeting program metric goals

CIA – 7: In 2012, the IOUs continued to identify “new,” “improved,” or Emerging Technologies Program (ETP) deemed measures as previously established in 2011. New, improved and ETP measures include those installed and paid in 2012 with no installation or payment history in 2006-2009.

The IOUs agreed to report the total installation occurrences for each of these measures by number of paid applications in 2012.

In 2012, PG&E had 30 occurrences of new, improved or ETP measures paid, out of 884 total occurrences, representing 3.4% of overall deemed applications paid in the Industrial segment in 2012.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

INDUSTRIAL – Calculated Incentives – PGE21021

The Industrial Calculated Incentives Program offers incentives for customized retrofit and retro-commissioning energy efficiency projects. The program also provides comprehensive technical and design assistance.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-8	PGE21021	Number and percent of new, improved, or ETP measures installed in completed calculated projects. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
CIA-9	PGE21021	*Number, percent, and ex-ante savings from commercial, industrial and agricultural sector of projects with ETP measures** included. (Report disaggregated savings by measure and number of installations by measure.) ** “ETP measure” defined as ET measures first introduced into the EE portfolio since January 1, 2006	2b

Progress towards meeting program metric goals

CIA-8: Calculated projects often lead to ad-hoc solutions that require a new and project-specific approach. Unlike deemed measures, a manual review of all calculated projects by staff would have been required. While such a review is possible, the results are highly subjective, making comparison of PPM results among the IOUs very challenging. By the end of 2012, PG&E had not yet developed a robust tracking mechanism for identifying “new or improved” calculated measures. PG&E’s PPM results, therefore, reflect only ETP measures introduced since 2010.

In 2012, 10 of 175 total Calculated measure occurrences were ETP measures. ETP measures represented 5.7% of all Calculated applications paid for the Industrial segment in 2012.

CIA-9: During the 2010-2012 program cycle, PG&E completed 381 Calculated projects within the Industrial segment. Of the 381 calculated projects, 60, or 16%, of these projects included ETP measures. Ex-ante electric savings captured for all Industrial calculated projects completed in this cycle (39,654,443 kWh electrical usage savings and 4,881 kW electrical demand savings, 10,058 therms). 73% of the electrical usage savings and 80% of the electrical demand savings derived from ETP measures only.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

AGRICULTURAL – PGE2103

The Statewide Agricultural Energy Efficiency Program offers strategic energy planning support; technical support, such as facility audits and calculation and design assistance; and financial support through rebates and incentives aimed at providing integrated energy management solutions for energy efficiency, demand response, and distributed generation, including renewables. Targeted segments from the agricultural sector may include agricultural growers (crops, fruits, vegetable and nuts), greenhouses, post-harvest processors (ginners, nut hullers and associated refrigerated warehouses), dairies and water and irrigation districts/agencies. Targeted segments from the food processing sector include fruit and vegetable processors (canners, dryers and freezers), prepared food manufacturers, wineries and other beverage manufacturers.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-1	PGE2103	Number and percent of agricultural customers participating in sub-programs (NRA, Deemed, Calculated, and CEI) by NAICS code, by size (+/- 200 kW per yr or +/- 50K therms per yr), and by hard to reach (HTR). <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
AG-1.1	PGE2103	Number percent of first-time** participants in energy efficiency programs. (Report disaggregate data by sub-program) **"First time" means customer has not participated in energy efficiency programs since December 31, 2005.	2b
AG-1.2	PGE2103	Percent of first-time** participants in energy efficiency programs. (Report disaggregate data by sub-program)	2b

Progress towards meeting program metric goals

CIA-1: Please see Excel file "CIA-1_ PGE.xlsx" for Agricultural Program Participation:

In 2012 there were 1,008 Agricultural participants.

- 491 non-residential audits were completed (437 were small and 54 were large Agricultural participants; 155 were hard to reach (HTR) Agricultural participants)
- 282 Agricultural participants in the Deemed Rebates program (201 were small and 81 were large Agricultural participants; 110 were HTR Agricultural participants)
- 229 Agricultural participants in Calculated programs (109 were small and 112 were large Agricultural participants; 131 were HTR Agricultural participants)
- 6 Agricultural participants in the Continuous Energy Improvement program

AG 1.1: Between 2010 and 2012, there were 2,130 PG&E customers that participated in PG&E's Agricultural Energy Efficiency Program for the first time. These customers took advantage of the following Program offerings:

- 676 participants completed a non-residential audit
- 864 received Deemed incentives
- 577 received Calculated incentives
- 13 enrolled in the Continuous Energy Improvement program

AG 1.2: Between 2010 and 2012, 93% of PG&E's total Agricultural Energy Efficiency Program customers were first time program participants. The high rate of first time customers during this period can be attributed to strides made to increase program awareness and participation among PG&E's agricultural segments. By conducting customer outreach and improving the flexibility of the program's offerings, PG&E became better aligned to the diverse needs of this customer segment. The high rate of first time participation in the various Agricultural program offerings reflects both the expansion of portfolio offerings and its positive reception by the agricultural segment.

- 98% of Agricultural customers that completed a non-residential audit were first time participants
- 91% of Agricultural customers received Deemed incentives were first time participants
- 91% of Agricultural customers that received Calculated incentives were first time participants
- 100% of Agricultural customers enrolled in the Continuous Energy Improvement program were first time participants

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

AGRICULTURAL – Continuous Energy Improvement – PGE21033

The Agricultural Continuous Energy Improvement (CEI) Program is a non resource program which provides a toolkit of planning and other resources, including analysis, benchmarking, goal setting, project implementation support, performance monitoring, and energy management certification.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-2	PGE21033	Number and percent of commercial, industrial, and agricultural CEI participants that meet short-term (2010-2012) milestones as identified by their long term energy plans. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
CIA-3	PGE21033	Lessons learned, best practices, and plan to ramp up the CEI program are developed. (Y/N)	2b
CIA-4	PGE21033	Number and percent of commercial, industrial and agricultural customers that created an energy plan via CEI will be tracked by program. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a

Progress towards meeting program metric goals

The CEI program was deployed in 2011 in order to provide optimal service and to easily adjust the offering following first customers' feedback. The metric results reported for the CEI program are cumulative (2010 to 2012).

CIA-2: In 2012, nine out of the thirteen Agricultural customers that continued with implementation of their Strategic Energy Management Plan (SEMP) are meeting their short term milestones. Schedules developed in plans can be challenging to meet in the Agricultural sector due to impacts of seasonal harvest and processing,

CIA-3: PG&E's plans for the 2013-2014 program cycle include carrying out many of the recommendations raised by The Cadmus Group, Inc., in the recently published process evaluation of the statewide CEI program. Many of the proposed recommendations have already been adopted by PG&E such as the cohort structure, built in off-ramps, and certification flexibility. PG&E will continue to work with the statewide team to adopt key program improvement opportunities, and will be launching a mid-sized pilot aimed to help customers make respective organizational adjustments for incorporating CEI into their daily business operations.

CIA-4: In 2012, eleven of the total thirteen customers in CEI have established a SEMF.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

AGRICULTURAL – Non-Residential Audits – PGE

The Agricultural Non-Residential Audits Program offers basic audits, integrated audits, and retro-commissioning audits, which provide an inventory of technical project opportunities and financial analysis information.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-5	PGE21014	Number and percent of commercial, industrial, and agricultural customers receiving non-residential audits by NAICS and SIC code.	2b
CIA-6	PGE21014	For commercial, industrial, and agricultural customers who received audits, the number and percent of adopted audit-recommended technologies, processes and practices, (Report disaggregated data by type of audit - Basic, Integrated, and Retro-commissioning audit).** ⁽¹⁾ **Data sources for reporting will come from (a) program tracking databases and (b) process evaluation to refine estimates.	2b

Progress towards meeting program metric goals

CIA-5: The attached file, "CIA-5_PGE.xlsx" shows all non-residential audits separated by segment (Commercial, Industrial, Agriculture) and NAICS code.

Percentages at the NAICS-code level represent the percentage of total audits in a given NAICS code versus the total number of audits for that segment. For example, we conducted 27 audits for agricultural dairy cattle and milk production, which represents 3.84% of the total 703 agricultural audits we performed.

Percentages at the segment level represent the number of total eligible customers in a segment versus how many audits we performed for that segment. For instance, we had 102,792 eligible Agricultural customers, 703 of which received an audit in 2010-2012, for a percent served of 0.68%.

CIA-6: The attached file, "CIA-6_PGE.xlsx" shows all audit conversion separated by segment (Commercial, Industrial, Agriculture) and Audit type (Basic, Integrated, RCx). Audit conversion is defined as a customer receiving an audit in 2010-2012 followed by the customer taking a database-tracked action in 2010-2012.

Basic and Integrated Audit conversion takes time. Audits are an initial step followed by multiple other resources to help the customer implement projects. As a result, many of the 2012 audits, and even some of the 2011 audits, have not yet been converted.

RCx Audits are implemented differently than our Basic and Integrated Audits. RCx Audits are delivered specifically as part of the RCx program defined process and are thus much closer in time to when the customer is implementing the RCx project. This leads to conversion of 80-100%.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

AGRICULTURAL – Deemed Incentives – PGE21032

The Agricultural Deemed Incentive Program offers rebates to customers in an easy to use mechanism to offset the cost of off-the-shelf energy saving equipment.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-7	PGE21032	<p>Number and percent of new, improved, or ETP measures** installed in the commercial, industrial and agricultural programs.</p> <p><u>Note:</u></p> <ul style="list-style-type: none"> • Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural) • "ETP measure" defined as ET measures first introduced into the EE portfolio since January 1, 2006 	2a

Progress towards meeting program metric goals

CIA – 7: In 2012, the IOUs continued to identify "new," "improved," or Emerging Technologies Program (ETP) deemed measures as previously established in 2011. New, improved and ETP measures include those installed and paid in 2012 with no installation or payment history in 2006-2009.

The IOUs further agreed to report the total installation occurrences for each of these measures by number of paid applications in 2012.

In 2012, PG&E had 29 of 471 total deemed measure occurrences were new, improved or ETP measures, representing 6.1% of overall deemed applications paid in the Agricultural segment in 2012.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

AGRICULTURAL – Calculated Incentives – PGE21031

The Agricultural Calculated Incentive Program offers incentives for customized retrofit and retro-commissioning energy efficiency projects. The program also provides comprehensive technical and design assistance.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CIA-8	PGE21031	Number and percent of new, improved, or ETP measures installed in completed calculated projects. <u>Note:</u> Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)	2a
CIA-9	PGE21031	*Number, percent, and ex-ante savings from commercial, industrial and agricultural sector of projects with ETP measures** included. (Report disaggregated savings by measure and number of installations by measure.) ** “ETP measure” defined as ET measures first introduced into the EE portfolio since January 1, 2006	2b

Progress towards meeting program metric goals

CIA-8: Calculated projects often lead to ad-hoc solutions that require a new and project-specific approach and bundling measures. By the end of 2012, PG&E was still developing better tracking mechanisms for identifying “new or improved” calculated measures. PG&E’s 2012 PPM results, therefore, reflect only ETP measures introduced since 2010.

In 2012, 8 of 665 total Calculated measure occurrences were ETP measures. ETP, therefore, represented 1.2% of all Calculated applications paid for the Agricultural segment in 2012.

CIA-9: During the 2010-2012 program cycle, PG&E completed 1,999 Calculated projects within the Agricultural segment. Of the 1,999 Calculated projects, 252, or 13% of these projects, included Emerging Technologies Program (ETP) measures. Ex-ante electric savings captured for all Agricultural calculated projects completed in this cycle (22,255,889 kWh electrical usage savings and 5,625 kW electrical demand savings, 713,435 therms). 73% of electrical usage savings and 80% of electrical demand savings resulted from ETP measures only.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

AGRICULTURAL –Pump Efficiency Services– PGE21035

The Agricultural Pump Efficiency Services subprogram offers pump testing services, pump retrofit incentives, and associated education and training, to help reinforce the energy and financial benefits of operating efficient pumping systems.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
AG-2	PGE21035	Percent of agricultural pump tests that lead to a repair or replacement.	2b

Progress towards meeting program metric goals

AG-2: The PG&E Advanced Pump Efficiency Program (APEP) provides incentives for pump tests and processes applications for calculated savings for pump bowl and impeller retrofit projects. The program has benefited from a consistent approach since 2006, with many of the pump tests conducted in any given year leading to repair and replacement projects that are ultimately completed one to three years later (the time lag is due to a number of factors, including crop plans, capital availability, and operational needs). 3.9% of pump tests provided in 2010-2012 resulted in pump or replacement projects during those program years. Over the coming years, significantly more pumps that were tested in 2010-2012 will be replaced or repaired which is expected to raise the overall program conversion rate of pump tests to projects to the longer term average of 8.1%.

To focus pump test efforts on older, lower-performing pumps, PG&E worked with Fresno State in the 2010-2012 cycle to modify the pump test incentives to specifically focus on pumps that have not received pump efficiency tests. The current program offers \$200 per pump for pumps which have not been tested for at least four years (versus \$100 for a standard test). In addition to identifying low performing pumps in need of retrofit, the pump test reports are also used by growers to better manage their irrigation systems and water and energy usage.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

RESIDENTIAL – PGE2100

California has set an ambitious market goal of reaching all 13 million existing homes with comprehensive energy efficiency improvements by 2020. To achieve significant progress toward this goal, programmatic efforts must be more integrated, coordinated and scaled significantly over the next eight years. To work towards this goal California's investor owned utilities (IOUs) have been and will continue to work more closely with the publicly owned utilities (POUs), water agencies, and other organizations in the state. In the 2010-2012 program cycle, the IOUs continue to offer comprehensive activities to reach California's diverse population, climate zones, and socio-economic classes to tap the economic potential available while advancing the initiatives of California Energy Efficiency Strategic Plan (Strategic Plan).

The 2010-2012 California Statewide Program for Residential Energy Efficiency (CalSPREE) was designed to offer and promote specific and comprehensive energy solutions within the residential market sector. The Residential portfolio employs various strategies and tactics to overcome market barriers and to deliver programs and services aligned to support the Strategic Plan by encouraging adoption of economically viable energy efficiency technologies, practices, and services.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-1	PGE2100	By targeted populations (homeowners, renters, property owners/managers), percent increase in the level of: (a) EE <u>a</u> wareness (b) EE <u>k</u> nowledge (c) EE <u>a</u> ttitude...(“AKA”)	2b

Progress towards meeting program metric goals

Res-1a: EE AKA of Homeowners/Renters:

During the 2010-2012 program cycle, SCE and PG&E jointly authorized an M&E study with Research Into Action (RIA) to collect homeowners and renters data to support this program cycle metric. As a prelude to this study, the IOUs authorized a whitepaper by Randazzo & Peters to illustrate a consumer behavior change construct referred to as the awareness-knowledge-Attitudes-Behavior (akAB) model of behavior change².

This model describes stages that individuals or households go through before lasting behavioral change can occur. This process is more consistent with a modified stage-model, starting with “awareness” leading to “knowledge”. Followed by specific “concerns and responsibilities”, leading to “intention” and “behavior change”. After the initial behavior change, some “behavior maintenance” may be required to ensure persistency of this “behavior change” (For more information, please refer to *2010-2011 General Household Population study in California*, CALMAC Report ID-SCE0321).

The RIA study is designed to accomplish the following: (1) validate the akAB behavior model, (2) provide measurement for this model. The study consisted of multiple pre-tests to validate

² Randazzo, K.V. and J.S. Peters. 2011. *Reconsidering What We Measure: A White Paper*. Residential Decision-Making and Proposed Standard Questionnaire Items. Portland, Ore.: Research Into Action.

the set of survey questions. The Home Energy Efficiency Rebate (HEER) participants (n=507) were compared and contrasted to a general population of homeowners/renters (n=93) in California. The general population of homeowners and renters were qualified to be in the market to make ENERGY STAR® qualified appliance purchases. This in contrast to the participants of the HEER program, who purchased appliances that were above and beyond ENERGY STAR® efficiency level

In final analysis, this study accomplished both objectives—(1) it validated the akAB behavior model by showing positive and strength of the correlation relative to the position within of the model construct, (2) provided measured data for the construct.

Res-1b: EE AKA of Property Owners and Managers

In 2010-2012, SCE and PG&E authorized a M&E study to collect data from the property owners/managers to support this PPM. As a prelude, we asked Randazzo/Peters to develop a decision model to help frame the thinking on decision making and behavior changes for this sector. We started out with an elaborate homeowners/renter behavior change model, but added additional elements such as business interests, tenants' concerns, and corporate policy to account for the fact that property owners and managers typically act based purely on business drivers and limitations.

We proceeded with a program participant versus non-participant survey to prove the following: (1) validate property owners and managers decision model, (2) measure AKA in the context of this model to support this PPM requirement. This study is due to be posted to the public website and CALMAC by the end of March 2013. See the preliminary results of the study in the attached table "RES-1_PGE_SCE.xlsx."

Here are the findings:

- (1) We are unable to validate the property owners & manager decision model,
- (2) The AKA construct is not appropriate for property owners & managers who are motivated by business concerns,
- (3) Although we have some preliminary findings, they are not validated due to the study approach.

Given all of the above, we have decided to not report these unclear results for this PPM. Instead we recommend using a construct that will better account for organizational behavior and profit-motivation of this property owner and manager role to evaluate this customer sector.

RES-1a: EE AKA of Homeowners/Renters

While there were many successes for this study, there were also issues that require improvement. For this overarching residential PPM, we are recommending to NOT repeat the study as-is.

- (1) This is an overarching residential PPM to measure the AKA of energy efficiency. In order to accomplish this goal, a set of generic EE survey questions were designed and used, as opposed to program specific AKA questions. These generic questions addressed topics such as "global warming", "environment", "finance" and etc. The IOUs programs are not designed to affect these generic concerns.
- (2) The study team had troubles designing questions that could clearly discern "awareness" and "knowledge". One view is to consider "awareness" and "knowledge" as a continuum. The other perspective is to work harder to come up with better survey design that can separate these two concepts.

- (3) It is not possible to set goals for this overarching generic AKA metric, since we could not link PPM results to program expenditure level. For example, it would be impossible to discern a reasonable level of program cost required to improve this metric by 5%.
- (4) The recommendation from the IOUs and ED's expert consultants is to eliminate this generic AKA PPM, and to create additional AKA PPMs that are directly relevant to the end-user programs such as PPM-14 AKA of the ARP program.
- (5) The other alternative is to insert this PPM into the Marketing Education and Outreach Program (MEO) to address broader marketing concerns.

Description of changes in metrics used and reasons for the change

RES-1b: EE AKA of Property Owners/Managers:

The IOU EM&V staff recommend to not repeat this PPM as-is. A more appropriate construct and model should be developed. The EM&V team do not believe a social-psychological approach such as AKA is the appropriate framework for this customer sector. A more appropriate PPM or Market Indicator should be considered by the IOU/ED evaluation team in future discussions related to MTIs and AKA metrics.

Program related or economic changes that impact metric results

As explained above.

RESIDENTIAL – Home Energy Efficiency Survey – PGE21001

The statewide Home Energy Efficiency Survey (HEES) subprogram has several survey offerings to help participants understand how they use energy and how they can improve its use. HEES also works towards advancing whole house energy solutions, innovative initiatives behavioral solutions, and, as warranted, demand side management (DSM) integration opportunities. HEES also provides information and referrals to other DSM programs, water conservation efforts, and low income programs, as applicable.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-2.1	PGE21001	Percentage of HEES participants that enroll in whole house resource programs	2b
RES-2.2	PGE21001	Percentage of HEES participants that enroll in other resource programs	2b

Progress towards meeting program metric goals

Res-2.1: PG&E made steady progress from 2010 to 2012 in increasing the percentage of HEES participants that enrolled in whole house programs. This aligns with the ramp up of the whole house programs during this same period. PG&E's metric progressed from 1 participant in 2010 to 29 participants in 2011; and a total of 52 conversions to whole house across the 2010-2012 program cycle. Conversion from HEES to a resource program takes time. As a result, many of the 2012 HEES surveys, and even some of the 2011 surveys, have not yet converted to whole house participation.

Res-2.2: In addition to whole house programs, PG&E achieved conversion percentages for other resource programs of 7.3% across the 2010-2012 program cycle. As with Whole House, conversion from HEES to other resource programs takes time. As a result, many of the 2012 HEES surveys, and even some of the 2011 surveys, have not yet converted.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

RESIDENTIAL – Home Energy Efficiency Rebate – PGE21004

The statewide HEER Program offered rebates to residential end-use customers to cover some of the incremental costs of purchasing energy-efficient products. Products were rebated through on-line or mail-in application processes, while refrigerators and dishwashers were also rebated through point-of-sale (POS) rebates. Rebates were offered for a specific list of energy-efficient products; this list of rebated measures varies slightly by utility. The measure list included, but was not limited to, items that could be delivered and installed either by the customer or a contractor, such as Energy Star Qualified® Room Air Conditioners, Water Heaters, CEE Tier 3 Clothes Washers, Insulation, Whole House Fans and Variable Speed Pool Pumps. Finally, the statewide HEER program was supported by various initiatives funded by the program, including salesperson training and in-field support by the field services team.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-3	PGE21004	Percent of program rebates made through the point of sale (POS) mode relative to all rebates	2a
RES-4	PGE21004	Percent of participating stores located in hard to reach (HTR) zip-codes relative to all program participating stores. <u>Note:</u> Data applies to rebates made through the point of sale (POS) mode	2a

Progress towards meeting program metric goals

RES-3 and RES-4: In 2012, PG&E had a total of 114,012 applications which were received via mail, online and POS. Of all applications received, 94% came in through mail in and online applications and were mostly attributed to ongoing work with Bay Area Water Agencies, marketing campaigns, outreach activities and POS merchandising at PG&E retail locations. PG&E had a two-tier energy efficient dishwasher for the first quarter of the year and a CEE Tier 3 refrigerator rebate for the last three quarters of the year using POS through three separate retailers. As a result, 6.0% of the total applications received were received through a POS transaction. There was limited external marketing of the POS program by the retailers so the majority of transactions are attributed to in-store promotional material and the ease of use by customers who were able to receive the rebate at the register. In addition, two factors that impact PG&E's POS rebates: PG&E only offers POS through channels that can provide customer installation addresses, whereas other IOUs are collecting a sample of installations. Also, clothes washers are the program's highest volume product but cannot be offered through POS due to PG&E's agreement to offer a combined utility and water agency rebate.

The three retailers that participated in the program have 83 locations in PG&E's service area of which 30 were located in "hard to reach" (HTR) zip codes. This equates to 36.1% of POS participating storefronts being in HTR locations. PG&E currently collects customer level data on 100% of POS transactions and will continue to evaluate POS, or other streamlined application opportunities, as an optional delivery mechanism to deliver energy saving products and services to our customers.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

According to conversations with value chain players as well as various appliance publications, the economic downturn over the last couple of years has contributed to a decline in appliance sales for reasons that are two-fold: new construction (typically representing about 20% of appliance sales) remains slow, and disposable incomes for replacement purchases of new appliances has tightened. However, PG&E field teams were able to leverage PG&E's programs to drive continued participation in appliance and general improvement programs.

RESIDENTIAL - Multifamily Energy Efficiency Rebate – PGE21007

The Multifamily Energy Efficiency Rebate (MFEER) Program offers prescribed rebates for energy efficient products to motivate multifamily property owners and managers to install energy efficient products in both common and dwelling areas of multifamily complexes and common areas of mobile home parks and condominiums. An additional objective is to heighten the energy efficiency awareness of property owners/managers and tenants.

The MFEER works to address the ongoing concern with "split incentives," where the residents are not the owners of the property, so they lack incentive to improve their energy usage. Similarly, the property owners typically do not live on-site and typically do not pay higher utility expenses associated with inefficient appliances, and thus lack any incentive to upgrade. MFEER was designed to drive this customer segment toward participation by offering property owners a variety of energy efficiency measures and services as well as consistent outreach with contractors who serve this segment.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-5	PGE21007	Percent of non-lighting measure savings as compared to the total EE measures adopted in the MFEER program. (KWh for single-commodity IOU and BTU for mixed-commodity IOU.)	2a

Progress towards meeting program metric goals

RES-5: PG&E continues to look for cost-effective non-lighting measures that can be introduced into the multifamily marketplace. PG&E has continued to encourage lighting contractors to diversify their products by adding a companion measure to their installation (i.e. include a gas measure such as a showerhead in each tenant dwelling). In addition, PG&E's product support team has updated efficiency requirements on water heaters, clothes washers, and refrigerators to capture more optimal energy savings. In 2012, 70.2 percent - measured in BTUs – of the program activity was for non-lighting measures.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

In 2012, the IOUs promoted the MFEER Program, as well as other related programs at various apartment industry trade shows. As a result, customer participation continued to increase with the engagement of energy specialists and large property management firms. PG&E also reduced the rebate amount for hardwired fixtures. As a result, the program met its energy

savings goals and was more cost effective overall, while increasing the percentage of savings coming from non-lighting measures.

RESIDENTIAL – Business Consumer Electronics – PGE21006

In 2012, the BCE program provided midstream incentives to retailers to encourage increased stocking, promotion, and sales of the highest-efficiency televisions. Working Statewide, including with SMUD, and regionally with partners including NEEA, the program provides incentives to the market actor best positioned to influence purchasing, stocking, and specification decisions. The program provides field training support services to update marketing materials in retail stores and educate the retail sales force on energy efficiency of the qualified products. PG&E also uses on-line systems to help educate customers and enable identification of the most energy-efficient and environmentally friendly products available in the market for multiple categories, including televisions and computers.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-6	PGE21006	Number of participating retailers and number of retail store locations by retailer, and other resellers receiving training.	2a
RES-7	PGE21006	Number of participating retailers receiving detailing.	2a
RES-8	PGE21006	The numbers and names of specific types of market actors (retailers, buying groups, manufacturers, and distributors) participating in the program and the approximate percent of all potential market actors that this represents (Reported as specified in reporting template include at the end of this Appendix.)	2b

Progress towards meeting program metric goals

RES-6: Please see attached Excel file “TABLE RES-6_BCE Statewide.xlsx” for number of store locations by retailer. In 2012, PG&E had 10 participating retailers, representing 345 store locations that received training.

RES-7: In 2012, all 10 participating retailers and each of the 345 store locations received detailing. The statewide BCE program succeeded in driving reductions in residential and business plug load energy use by continuing to offer incentives for the most efficient ENERGY STAR® and beyond qualified televisions. In an effort to increase the availability of more efficient televisions, the BCE program team, once again, increased specifications for televisions from their original 2011 specification. This ensured the program’s continual push for advancement in the stocking, availability and promotion of the most energy efficient televisions in the market. In 2012, the California utility BCE team (consisting of SCE, PG&E, SDG&E, and SMUD) also explored new products, technologies and channel partners to include in the BCE program for future program years. The BCE program also worked with ENERGY STAR® to help in the development of more advanced ENERGY STAR® specifications and provided input on EPA’s Vision and Guiding Principles document for electronics.

PG&E engaged with all major electronics retailers in our service territory and one buying group representing independent retailers. The 10 participating retailers enrolled in the program in 2012 included Best Buy, Costco, Fry’s Electronics, Kmart, Pacific Sales, Sam’s Club, Sears, Target, Wal-Mart, and Nationwide as the buying group; there were 345 retail store locations represented. All retailers participating in the program received in-person sales associate training and point of sale signage that was placed on all qualifying products. The trainings and materials were beneficial in assisting the retail associates to provide consumer education around the benefits of purchasing energy-efficient televisions, computers and monitors.

Brandsource, a buying group that engaged in the program in 2010, ceased participation in 2011 but has again showed interest in being part of the BCE program.

Correction noted: In 2011, the statewide team reported number of stores that received detailing (351) for PPM RES-7, rather than the number of retailers (11). PG&E has made this correction in the 2010-2012 PPM Master Spreadsheet.

RES-8: PG&E continues to maintain strong retail partnerships and are engaged with 100% of the major electronics retailers in our service territory covering 10 retailers and 345 store locations – this accounts for 100% of non-border stores.

Description of changes in metrics used and reasons for the change

The number of manufacturers who participated is not applicable as PG&E worked directly with only two of the manufacturers, but the program touches the vast majority of TV manufacturers through the retailers who participate.

Program related or economic changes that impact metric results

PG&E made a strategic decision in 2012 to focus resources in the retail channel to further develop and support strategic relationships with our retail partners and minimize our focus with manufacturers and distributors. Because of this and the overall decrease of desktop computer sales and their corresponding potential savings, it was decided to discontinue incenting desktop computer products and monitors. The electronics industry continues to face a challenging economic environment, especially with big box stores facing competitive pressure from e-commerce. There have been some store closures because of these economic challenges, but overall, the number of stores in our program has remained relatively stable. Going forward, retailers are beginning to examine their marketing strategies to ward off sales erosion to this competition and there may be changes in methods employed to retain their market share.

RESIDENTIAL – Advanced Lighting – PGE21003

The Advanced Consumer Lighting Program provides customers with incentives in the form of instant rebates that significantly reduce the cost of energy-efficient lighting products, introduce energy-efficient lighting products to the market, and influence the purchasing behaviors of customers. A broad array of product types and models were available for this program's incentives. The 2012 program focused on specialty CFLs. In addition, the IOUs collaborated on a statewide Lighting Market Transformation program strategy that coordinated IOU efforts to further efficient lighting technology in California.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-9	PGE21003	Percent kW/kWh/Quantity of incented products under the Advanced Lighting program as compared to the Basic Lighting program, by product type.	2a
RES-10	PGE21003	Percent of products incented under the Advanced Lighting Program by distribution channel* and by hard to reach (HTR) zip-codes.	2a

Progress towards meeting program metric goals

RES-9: In 2012, approximately 39% of incentivized lighting units were advanced and these products delivered approximately 39% of kW and 39% of kWh energy savings in the Upstream

Lighting Program (up from 26% of kW and kWh savings in 2011). PG&E has continued to expand the number of advanced lighting measures available to customers as well as the overall rebates paid for advanced lighting products in 2012, and will continue to do so in the next portfolio cycle. See details by product type in the attached Excel file "TABLE RES-9_PGE.xlsx."

RES-10: In 2012, PG&E partnered with a broad range of retail outlets to make advanced lighting options more affordable to its customers. These products were predominantly delivered through grocery stores (19%), discount stores (18%), hardware stores (17%), and home improvement stores (15%). Further, the program reached a significant number of customers shopping for advanced lighting products in stores located in hard to reach zip codes (31%).

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

PG&E spent considerable time in 2012 educating manufacturers and retailers on the shift in program priority from basic to advanced lighting options. Advanced products typically have less market demand than basic products and can require more shelf space per product. As such, it has required a great deal of education to explain the shift in emphasis to retailers and manufacturers and to influence corresponding allocation requests. Furthermore, PG&E has influenced manufacturer allocations by offering higher rebate amounts for advanced products. However, because of the demand, cost, and/or size challenges associated with advanced products, large retailers often require some basic products to be included as part of their allocation in order to participate in the Upstream Lighting Program. PG&E continues to seek partnerships that will allow it to deliver affordable advanced lighting products to customers throughout its service territory.

RESIDENTIAL – Basic CFL – PGE21002

The Residential Lighting Incentive Program for Basic CFLs provides customers with incentives in the form of instant rebates that reduced the cost of energy-efficient lighting products. It encourages the introduction and adoption of energy-efficient lighting products into the market, increases the availability of existing products, and influences the purchasing behaviors of customers. More than 600 retailers at over 1,500 store locations participate in PG&E's program.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-11	PGE21002	During 2010-2012, implement marketing efforts and/or campaign to encourage prompt installation of CFLs as required in D.09-09-047. (Y/N)	2b
RES-12	PGE21002	Percent of products incented under the Basic Lighting Program by distribution channel and by hard to reach (HTR) zip-codes.	2a
RES-13	PGE21002	Percent kW/kWh/Quantity of incented products under the Basic CFL program as compared to the Advanced Lighting program.	2b

Progress towards meeting program metric goals

RES-11: PG&E added messaging in the Energy House Calls campaign. In the Home Energy Check-up How To (<http://energyhousecalls.com/#/do/hec>), there is a section on taking compact fluorescent lights out of the closet and using them.

In addition, we added language to the Online Lighting Buyer's Guide, available at this website: (http://www.pge.com/includes/docs/pdfs/myhome/saveenergymoney/eebuyersguides/BuyersGuide_Book.pdf)

The language says:

Start saving now—replace incandescent and halogen bulbs today.

Do not wait for your incandescent and halogen bulbs to burn out.

Instead, install CFL and LED bulbs today to start saving energy and money right now.

RES-12: In 2012, PG&E partnered with a broad range of retail outlets to make basic efficient lighting options more affordable to its customers. These products were predominantly delivered through grocery stores (35%), home improvement stores (15%), discount (28%), and hardware stores (3%). Further, the program reached a significant number of customers shopping in stores located in hard to reach zip codes (35%).

RES-13: In 2012, about a third of our quantities and energy savings comes from Advanced lighting (including advanced CFLs and LEDs). In response to the metric, PG&E shows in the attached Excel file "TABLE RES-13_PGE.xlsx" the percent of Basic CFL products as compared to Advanced Lighting products.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

Per recommendations provided in the 2006-2008 evaluation report, PG&E continues to look for opportunities to shift its basic lighting allocations from "Big Box" stores to other channels, including "mom and pop," discount, and hard to reach stores.

RESIDENTIAL – Appliance Recycling – PGE21005

The Appliance Recycling Program (ARP) picks up operable but inefficient appliances, primarily refrigerators, from residential dwellings and businesses to prevent their continued operation by recycling them in an environmentally safe manner.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-14	PGE21005	Level of program participants' AKA ("Awareness, Knowledge, Attitude") toward the appliance recycling subprogram.	2b
RES-15	PGE21005	Number of program appliance units by year, appliance type, model # (as available), age (estimated), and size.	2a

Progress towards meeting program metric goals

RES-14: During the 2010-2012 program cycle, SCE and PG&E M&E jointly authorized an ARP process evaluation to collect data for Res-14 PPM with the Cadmus Group. This survey included both program participants (n=200) and non-participants (n=148) in PG&E's service territory. The reported results are preliminary study findings, which are subject to change as we finalize this report in Q2 2013. See the preliminary results of the study in the attached table "RES-14_PGE.xlsx."

The intent of this metric is to compare and contrast ARP program participants and non-participants' awareness, knowledge and attitude toward the ARP program. "Awareness" is based on participants' and non-participants' recall about program sign-up or hearing about the program. In this case, 100% of participants recall signing up with the program, while 36% of

non-participants recall hearing about the PG&E ARP program. “Knowledge” is based a series of open-ended questions to discern their knowledge about key program features. There is no point of comparison for this “knowledge” metric relative to non-participants. Given how this survey is designed, it is possible to participate in the PG&E ARP program (i.e., 100% awareness), but not be able to recall key features of the program (i.e., environmental safe disposal, recycle and reuse certain raw material, etc.). For the “Attitude” metric, the study interpreted “customer satisfaction” as a form of “attitude”. This is an acceptable interpretation according to established social science. The study collected data on three different aspects of “attitude”: (1) customer satisfaction with the program services, (2) likelihood of customer recommending the ARP program to others, (3) overall satisfaction (i.e., attitude) toward the program. For RES-14, a program cycle metric (i.e., 2b metric), a study is required to gather these data. Given the current findings, the Statewide IOU M&E and program team are considering an appropriate and cost-effective way to measure “attitude” going forward.

RES-15: During 2012 approximately 16,000 old and inefficient refrigerators and 2,000 freezers were taken off the grid and recycled. This helped reduce the install base saturation of older, less-efficient appliances, which otherwise would have likely continued drawing power. In 2012, 66% of the refrigerators recycled were 1996 vintage or older, indicating there is still a significant opportunity to remove the oldest and least efficient refrigerators from the grid. See more details in the attached Excel file “TABLE RES-15_PGE.xlsx.”

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

The “One-Touch” Retailer approach was continued through 2012, in an effort provide a more efficient program option of picking up an old unit for recycling at the time of new refrigerator delivery. The One-Touch approach was expanded to all of the Sears locations in the PG&E electric service area as well as to 10 Best Buy and 3 Western Appliance locations.

Traditional ARP volume remained off slightly relative to historical performance. According to conversations with value chain players as well as review of various appliance publications, the economic downturn over the last couple of years has contributed to a decline in appliance sales for reasons that are two-fold: new construction (typically representing about 20% of appliance sales) has remained slow, and disposable incomes for replacement purchases of new appliances has tightened. Since new refrigerator purchases are often an opportune moment to promote refrigerator recycling, the economic conditions likely had an impact on 2012 program activity, but were mitigated by PG&E’s more aggressive in-store retail marketing campaign designed to increase program uptake.

RESIDENTIAL – Whole House Retrofit – PGE21008

The Prescriptive Whole House Retrofit sub-program (PWHRP) was a new addition to the 2010-2012 Statewide residential energy efficiency portfolio. In 2012, PG&E continued to ramp participation in its full Whole House Performance (or Energy Upgrade California) Program after its launch in 2011. PG&E continued to refine and expand the offering to yield substantial, comprehensive and new long-term home energy savings and eliminate lost opportunities in existing homes to the maximum extent possible and bring in new contractor and customer participants.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
RES-16.1	PGE21008	Number of homes treated in the program for 2010-2012. (Report by prescriptive program)	2a
RES-16.2	PGE21008	Number of homes treated in the program for 2010-2012. (Report by performance program)	2a
RES-17	PGE21008	Number of enrolled contracting firms participating in the program	2a
RES-18	PGE21008	Average Ex-ante savings per home as reported (average kWh, therms, kW) for both performance and prescriptive programs by climate zone	2a
RES-19	PGE21008	Average and range of evaluated energy savings per home (prescriptive and performance programs)	2b
RES-20.1	PGE21008	Number of homes not passing Quality Assurance/Quality Control review, by IOU	2a
RES-20.2	PGE21008	Percent of homes not passing Quality Assurance/Quality Control review, by IOU	2a

Progress towards meeting program metric goals

RES-16.1: In PG&E's territory, 2,792 jobs were completed with rebates paid in 2012.

RES-16.2: There were 45 prescriptive and 2,747 performance job rebates paid in 2012.

RES-17: There were 244 participating contractor firms enrolled in the program by the end of 2012. PG&E's goal for this program cycle was 73 participating contractors.

RES-18.1:

The average savings by climate zone can be found in PG&E's Master PPM Spreadsheet for the performance jobs. These savings were calculated using the CEC approved modeling software, EnergyPRO.

RES-18.2:

The average savings by climate zone can be found in PG&E's Master PPM Spreadsheet for the prescriptive jobs.

RES-19: The average and range of evaluated energy savings per home can be found in the attached table "RES-19_PGE.xlsx."

For the performance program jobs, savings were calculated using the CEC approved modeling software, EnergyPRO. As program uptake ramped over the program cycle, the range of savings widened with the variation of the increased number of participants, as one would expect. Comparing 2010 to 2012 metrics, average kW and kWh savings increased 69% and 63%, respectively from 1.48 and 1,189 to 2.50 and 1,942, respectively over the cycle, while average therm savings/home went down 9% from 355 to 321.

For the prescriptive program jobs, savings were deemed and based on the prescribed package of measures. As prescriptive job numbers rose only 15% in 2012 in favor of performance jobs that rose 186% in 2012, average savings dropped and the range of prescriptive savings narrowed. The average kW and kWh savings per home in 2012 was 0.11 and 66, respectively, and the average therm savings per home was 20.

RES-20.1, RES-20.2: In 2012, a total of 760 field verifications took place and were conducted by independent third party verifiers and PG&E Central Inspection Program inspectors. Of these 760 verifications, 117 corrective actions were required and remedied. Therefore, 15.4% of

homes required corrective action and did not pass QA/QC review, a decrease from 21% in 2011.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

LIGHTING MARKET TRANSFORMATION (LMT) – PGE2105

The Statewide Lighting Market Transformation Program (LMT) establishes processes through which the IOUs develop and test market transformation strategies for emerging lighting technologies (products, systems and design strategies), as well as for technologies already in the energy-efficiency programs. The LMT Program addresses lighting opportunities across various market segments for both replacement and new construction activities. These LMT activities augment and leverage the existing IOU programs for evaluating and testing the market transformation needs for short and long term activities to achieve the zero net energy (ZNE) goals in the Strategic Plan. LMT includes market research, coordination activities, and an educational component aimed at improving the information available to market actors regarding new and existing lighting technologies. The program also formalizes a process by which the IOUs can rapidly introduce advanced lighting solutions and emerging technologies to the marketplace, continually improve the IOUs' current lighting programs across all market sectors, and develop innovative new program strategies to continually advance the lighting market.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
LMT-1	PGE2105	Develop a lighting technology roadmap (i.e., what's new and available by when (MM/YY), using available information from all IOU and external parties) by January 2011 to be reported twice in 2011 and annually thereafter. (Y/N)	2a
LMT-2	PGE2105	Develop a communication plan, by March 2011, to make the lighting technology roadmap, pipeline plans, and technology resource information from this program available on the statewide marketing, education and outreach (ME&O) web portal by July 2011, and update annually. (Y/N)	2b
LMT-3	PGE2105	Number of recommended projects initiated and completed, with findings and recommendations (i.e., this is a tracking of lighting related projects for ET, Advanced Lighting and 3rd parties), by project type: (a) work papers, (b) white paper, (c) pilot project (d) strategy document.	2b
LMT-4	PGE2105	Number of EE lighting measures added, removed, or updated as a result of LMT activities and influence, and reported in annual LMT June Report	2a

Program progress towards meeting program metric goals

The LMT program planning tools were completed and implemented in 2012. These tools consist of the Lighting Solution Workbook, Lighting Activity Workbook, and Lighting Solution Pipeline Plans. The LMT program also continued to provide direction and guidance for many other IOU activities.

LMT-1

The Lighting Solutions Workbook was completed in January 2012 and presented to ED staff on Jan. 30, 2012, the West Coast Utility Lighting Team Meeting and EM&V Stakeholder meeting in March, and the ACEEE Summer Study in August. The Lighting Solutions Workbook and its accompanying reports are available for download at <http://www.lightingmarkettransformation.com/>.

Throughout the year, the workbook data was used to inform project activities in programs such as Emerging Technologies, Energy Efficiency programs, and Codes and Standards input. For example, the workbook informed the Advanced Lighting Controls Application Certification effort on the energy savings potential and market barriers associated with the controls education and training.

LMT-2

The initial LMT Communication Plan was submitted to the Energy Division in March 2011, and utilized the statewide Engage360 site as the web portal for posting the LMT program information. The Communication Plan was the first step in expanding LMT efforts to involve LMT partners and stakeholders beyond the IOUs. In October 2011 an Assigned Commissioners Ruling directed the IOUs to freeze spending on Engage360, including the Engage360.com web portal, until further direction was provided by the Commission. In May 2012, the Commission issued Decision 12-05-015 Providing Guidance on 2013-2014 Energy Efficiency Portfolios and 2012 Marketing, Education and Outreach, which directed the utilities to fully transition all relevant materials to the Energy Upgrade California web portal, with the Engage 360 web portal decommissioned, by no later than the end of 2013 (D.12-05-015, OP 127).

In addition, the Lighting Solutions Pipeline Plans for Residential and Exterior market sectors were completed in 2012. The plans leverage information from the LMT workbooks to characterize the lighting market and relevant trends, describe the market transformation process to push more efficient lighting solutions and reduce support for transformed solutions. The pipeline plans help IOUs meet the lighting needs of customers as well as help meet the IOUs' and California's energy efficiency goals by identifying strategic lighting solutions to push and trim. The Pipeline Plans are available for download at <http://www.lightingmarkettransformation.com/>.

LMT-3

The Lighting Activity Workbook was completed at the end of 2012 with a total of 394 lighting activities tracked across 17 energy efficiency organizations. Through coordination among the LMT partners involved in the effort, many aspects were added to enhance future collaboration and coordination, including project type, target sector, technology, application, and lead organization. Of the 394 lighting activities tracked, the breakdown of project types were:

- 102 Emerging Technologies activities
- 79 Education and Training activities
- 71 Workpaper Development activities
- 45 Codes and Standards activities
- 44 Incentive Program activities
- 31 Marketing activities
- 12 EM&V activities
- 9 Innovative Pilot activities
- 1 Market Transformation activity

LMT has indirectly influenced a number of the 394 lighting activities tracked at varying levels, particularly the 210 CA IOU-lead activities. Additional information about each activity can be found in their respective programs and links listed in the workbook.

The workbook is intended to work in conjunction with the Lighting Solutions Workbook. A single Lighting Solutions Workbook, by itself, does not show the dynamic nature of market transformation as it provides a snapshot data on potentials and barriers. The Lighting Activity workbook, on the other hand, shows dynamic activities that all have an influence on the lighting market. Having a comprehensive dataset on these more dynamic activities helps reduce duplication of efforts and provides a vehicle for increased collaboration and coordination among LMT partners. The Lighting Activity Workbook and report are available for download at <http://www.lightingmarkettransformation.com/>.

LMT-4

Per the PPM requirement, this metric will also be reported in the June 2013 LMT Report.

The LMT program has influenced the following 23 measures:

1. Fluorescent - T5
2. Fluorescent - T8
3. Fluorescent - T12
4. Fluorescent - CFL - Fixture
5. Fluorescent - CFL
6. Fluorescent - Cold Cathode
7. Fluorescent - Induction
8. High Intensity Discharge Lamps
9. LED - Retrofits in Low Temp Reach-in Display Cases
10. LED - A-Lamps
11. LED - PAR30
12. LED - PAR38
13. LED - MR16
14. LED - PAR20
15. LED - Down Light
16. LED - Wall Pack
17. LED - Pool Light
18. LED - Spa Light
19. LED - Open Sign
20. LED - Exit Sign - Recommend Removal
21. Wireless Controls
22. Interior Controls
23. Exterior Controls

The LMT Program collaborates and coordinates lighting activities with other IOU programs, such as Emerging Technologies, incentive programs, Codes and Standards, and Marketing Education & Outreach programs, and Workforce Education and Training. LMT has also worked closely with government and industry partners to share, collaborate, and coordinate lighting energy efficiency activities. These organizations include: the CPUC ED, CEC, California Lighting Technology Center, Department of Energy, Environmental Protection Agency, National Resources Defense Council, ACEEE, CEE, DesignLights Consortium, New Buildings Institute, and other efficiency organizations outside of the IOUs, such as SMUD and Bonneville Power Administration.

Description of changes in metrics used and reasons for the change

N/A

Program or economic changes impacting metric performance

The dramatic economic challenges facing IOU customers has resulted in increased focus on delivering products that can cost-effectively reduce energy in the near term as well as plan for technologies that will deliver savings into the future.

NEW CONSTRUCTION – PGE2104

The IOUs' statewide New Construction Program promotes energy efficiency and use of energy-efficient measures by builders. Statewide new construction programs include: Savings by Design (non-residential), California Advanced Homes (residential site-built) and ENERGY STAR® Manufactured Homes (residential factory-built). The new construction program focuses on the maximization of energy efficiency as an energy resource as well as supporting the transformation of the new construction market.

NEW CONSTRUCTION – California Advanced Homes Program (CAHP) – PGE21041

California Advanced Homes Program (CAHP) is part of the statewide Residential New Construction program offering. CAHP encourages single and multi-family builders of all production volumes to construct homes that exceed California's Title 24 energy efficiency standards by a minimum of 15%. Through this plan, multi-family and single-family projects are approached identically for program purposes except where explicitly noted.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
NC-1	PGE21041 PGE2176	Number and percent of committed CAHP participant homes (applied and accepted) with modeled, ex-ante savings exceeding 2008 T24 units (Single family (SF) and multi-family (MF)) by 15%-19%, by 20%-29%, 30%-39%, and 40+%.	2a
NC-2	PGE21041	Percent of (current year SF CAHP program paid units)/ (SF building permits within service territories from the previous year)	2a
NC-3	PGE2176	Percent of (current year MF CAHP program paid units)/ (MF building permits within service territories from the previous year)	2a
NC-4	PGE21041 PGE2176	Number and percentage of CAHP participant new homes verified* by IOUs' HERS which exceed Title 24 (T24) building standards (SF and MF) by 15%-19%, 20%-29%, 30%-39%, 40%-70%.	2b

Note: The original intent of NC-2 and NC-3 was to provide an estimate of program market penetration. The denominator, building permits within service territories from the previous year, is a proxy to estimate current year newly completed building units (SF or MF). Since the accuracy of this proxy is unknown, care should be taken in interpreting these PPMs.

Progress towards meeting program metric goals

Data for multifamily program participation is collected from PG&E's California Multifamily Advanced Homes Third Party Program (Program ID PGE2176).

NC-1: For 2012, 80% of the single family lots (6323 out of 7888 total) and 58% of multifamily units (2883 out of 5025 total) that enrolled in the program were designed to exceed code by 20% or greater. The CAHP single family program saw a significant increase in the number of committed units designed to exceed the code by 30% or greater in 2012. The share of new single-family committed homes at 30%+ above code rose from 22% to 40% between 2011 and 2012. This increase may have resulted from a combination of increasing market acceptance of "high efficiency" home technologies and greater understanding among builders of the benefits of the scaled incentive structure, which rewards higher efficiency homes with higher incentives.

NC-2 and NC-3: The ratio of current-year paid homes to prior-year permits, which is used as a proxy for the percent of the new home construction market that participates in the program, increased for both single and multifamily new construction. This may be a sign that market awareness of the program is increasing and/or that efforts to increase the efficiency of program

processes have paid off in terms of higher builder satisfaction with—and participation in—the program.

NC-4: All program homes must contract with a certified HERS rater. Thus, the percentages for this metric are all 100%.

Please note that data for paid single family homes broken down by percent above Title 24 building standards is only available for homes committed into the program after 2011.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

NEW CONSTRUCTION – ENERGY STAR® Manufactured Homes – PGE2178

The ENERGY STAR® Manufactured Homes Program (ESMH) is part of the statewide Residential New Construction (RNC) program offering. ESMH addresses new factory-built housing not covered under the States T-24 energy codes.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
NC-5	PGE2178	Number of manufactured housing units sold in IOU service territories (via retailers and/or manufacturers) participating in program	2a
NC-6	PGE2178	Number and percent of participating projects utilizing: (a) whole house incentive for gas heat; (b) whole house incentive for electric heat	2a

Progress towards meeting program metric goals

The ESMH program was launched in 2010. In 2012, PG&E paid rebates for 350 participating ENERGY STAR® manufactured homes sold in our service territory. This increase was due to dealers increased familiarity with the program and the manufactured homes market starting to recover after an earlier decline in the housing market.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

At the end of 2012, PG&E discontinued its Energy Star Manufactured Housing Third Party Program. After three years, PG&E determined that it could not be operated cost-effectively. This program closure was discussed in PG&E's January 14, 2013 compliance advice letter filing for 2013-2014 EE Portfolio approval.

NEW CONSTRUCTION – SAVINGS BY DESIGN – PGE21042

The Savings by Design subprogram is designed to overcome customer and market barriers to designing and building high performance facilities. The subprogram took the form of two primary approaches, a Systems (& Simplified) Approach for energy efficiency measures targeted

towards building sub-systems, and a Whole Building approach targeted towards a comprehensive, integrated and holistic form of high performance design. Owners and design teams were incented to perform at least 10% better than 2008 California non-residential Title 24 building standards. Incentives were provided in the form of design assistance in an effort to deliver the most energy efficient design to building owners. Special incentives were offered for owners that chose to obtain green certification.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
NC-7	PGE21042	Average site energy install, ex-ante (kBtu/sq ft-yr and demand (kW/sq ft) for participating commercial new construction by building type and climate zone	2b
NC-8	PGE21042	Percentage of committed participating Whole Building Approach projects that are expected to reach a minimum of 40% less energy than 2008 T24 codes requirements	2b

Progress towards meeting program metric goals

NC-7: The SBD subprogram delivered an average site energy install, ex-ante savings of 38.32 kBTU/sq-ft-yr and demand savings of 0.18 kW/sq ft over each year of the 2010-12 program cycle. This was split between projects using the Whole Building Approach, which delivered 18.32 kBTU/sq-ft-yr and 0.13 kW/sq-ft, and the Systems (including a Simplified Systems) Approach that delivered 20 kBTU/sq-ft-yr and 0.05 kW/sq-ft. A detailed table of the breakdown by climate zones is attached as Table “NC-7_PGE.xlsx”

NC-8: For the 2010-12 program cycle, the SBD program had 3.6% of committed Whole Building Approach projects that reached a minimum of 40% less than 2008 Title 24 code requirements. It should be noted that there were many more projects that went through the SBD subprogram using a Whole Building Approach, but did not have a Title-24 baseline to compare to. The SBD program prescribes industry standard baselines for such facilities. These facilities are not included in the NC-8 PPM reporting.

It should also be noted that with SBD programs, many applications paid in 2010 were projects that began in the previous program cycle. With the added incentives that focus on post-construction commissioning and sub-metering that began in 2011-12, we expect to see an increase in participating projects that save more than 40% below the 2008 T-24 baseline in 2013-14. In addition, lessons from the 2010-12 ZNE Pilot Program are being incorporated into the SBD program in 2013-14 and this savings for this PPM are expected to trend upwards for future program cycles.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

Some slowdown in the number of applications coming through the program was seen in late 2010 and for most of 2011. However, a strong uptake, especially with the Systems Approach and to a lesser extent the Whole Building Approach, reversed that trend in 2012. These numbers possibly reflect the larger macroeconomic reality of the State over the duration of the 2010-12 program cycle. Overall, program participation remained healthy averaged over the full program cycle.

CODES AND STANDARDS – PGE2107

The Codes and Standards (C&S) Program saves energy on behalf of ratepayers by influencing improvement in energy efficiency regulations, by improving compliance with existing codes and standards, and by working with local governments to develop ordinances that exceed statewide minimum requirements. C&S program activities extend to all buildings and potentially any appliance in California, for both advocacy and compliance improvement.

The C&S program aggressively supports the goals of the Strategic Plan which highlights the role of C&S in meeting Assembly Bill (AB) 32 objectives, including Building Code and Appliance Standards Advocacy, Compliance Enhancement and Reach Code technical support.

CODES AND STANDARDS – Building Standards Advocacy – PGE21071

The Codes and Standards Building Standards Advocacy subprogram primarily targets improvements to Title 24 Building Efficiency Regulations that are periodically updated by the CEC. The subprogram also seeks changes to national building codes that impact CA building codes.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CS-1	PGE21071	Number of Residential and Commercial CASE studies, as defined in Building Standards Objectives 1 & 2 for which adoption by the CEC is anticipated by the IOUs, targeting efficient technologies practices and design in each of the following areas: lighting; HVAC; envelope; water heating; and cross-cutting measures in support of the following: (a) Integrated Design, including data management and automated diagnostic systems, with emphasis on HVAC aspects of Whole Building, (b) ZNE technologies, practices, and design in Residential Sector, (c) Peak efficient technologies including plug loads and HVAC technologies, (d) Advanced Lighting Technologies	2b

Progress towards meeting program metric goals

PPM results for Codes and Standards are reported on a statewide basis.

CS-1: The Codes and Standards program team submitted 56 CASE studies, which were docketed at the California Energy Commission (CEC). The case studies include a broad range of measures that were adopted into 2013 T-24 Building Efficiency Regulations, all of which contribute towards achieving state policy goals. Examples of where the case studies addressed some the specific areas highlighted in PPM CS-1:

- (a) Integrated Design, including data management and automated diagnostic systems, with emphasis on HVAC aspects of Whole Building,
 - Nonresidential FDD requirement for packaged rooftop economizers – requires automated diagnostics for approximately 50% of the commercial HVAC sector
 - Residential integrated mandatory requirements for duct sealing, sufficient return grill size of performance measurement of pressure drop and minimum airflow

together provide an enhanced HVAC efficiency that is not captured by considering just equipment efficiency.

(b) ZNE technologies, practices, and design in Residential Sector

- Low U-factor, low SHGC windows provide significant reductions in cooling loads. Integrated HVAC requirements described above also provide significant savings that one would expect in a ZNE home.
- CASE studies on: no ducts in conditioned spaces (NDUCS) or high performance attics (HPAD) with roof deck insulation and high R-value ducts, and high R-value walls are all features one would expect in an ZNE home. Much of the background information was collected for this round of standards and ultimately they were not adopted. Having learned about the issues for these measures we plan on bringing these measures up again and building upon the previous CASE work.

(c) Peak efficient technologies including plug loads and HVAC technologies,

- The combination of controllable lighting and demand responsive lighting controls for 15% of lighting connected power in all nonresidential buildings larger than 10,000 sf indicates that the capability for auto DR control will be available in most buildings.
- In the 2008 standards all nonresidential buildings that had a DDC to the zone system were required to have the capability to reset all zone setpoints based upon a DR signal. The 2013 CASE studies successfully advocated for all systems with stand-alone thermostats (i.e. single zone systems) also have the capability to automatically reset setpoints based upon the demand response signal.
- For residential homes an occupant controlled smart thermostat (auto DR ready t-stat) are allowed as an alternative to solar ready roofs.

(d) Advanced Lighting Technologies

- CASE reports promoted low cost dimming ballasts as part of the controllable lighting requirement. This dramatically increases the possibility for advanced lighting controls in affected buildings.
- CASE reports advocated for broad based use of auto demand response lighting in nonresidential buildings > 10,000 sf which will promote both dimming lighting and DR communication but in many instances will provide the impetus to install addressable lighting.
- The CASE reports advocated for a massive expansion of the requirements for various types of occupancy sensing controls including partial off occupancy sensing in: warehouse and library stacks, parking garages, and hardscape (exterior applications) lighting mounted less than 24 ft.
- The shift from optional to mandatory daylighting controls under some circumstances increases the conditions in a building where controllable lighting will be available.
- Residential high-efficiency lighting – CASE reports promoted the development of a 'all high-efficacy' lighting package and development of residential lighting budgets. Much of the background information was collected for this round of

standards and ultimately they were not adopted. Having learned about the issues for these measures we plan to build upon the previous CASE work.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

CODES AND STANDARDS – Appliance Standards Advocacy – PGE21072

The Codes and Standards Appliance Standards Advocacy subprogram targets both state and federal standards and test methods: improvements to Title 20 Appliance Efficiency Regulations by the CEC, and improvements to Federal appliance regulations by the USDOE. Advocacy activities include, but are not limited to, development of Title 20 code enhancement proposals and participation in the CEC public rulemaking process, USDOE comment letters based on IOU research and analysis, and participation in direct negotiations with industry.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CS-2	PGE21072	Number of draft CASE Studies, as defined in Appliance Standards Objective 1, developed as mutually agreed upon by the CEC and IOUs in support of plug loads, refrigeration, advanced lighting, and/or other technologies that are adopted by the CEC, within authorized budget.	2b

Progress towards meeting program metric goals

PPM results for Codes and Standards are reported on a statewide basis.

CS-2: 1 CASE study complete and docketed at CEC for a broad range of battery charger sizes and applications.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

No other case studies were completed, as the CEC did not commence a rulemaking for additional proposals.

CODES AND STANDARDS – Compliance Enhancements Training – PGE21073

Compliance Enhancement includes Extension of Advocacy (EOA) elements of building and appliance standards subprograms, and the Compliance Enhancement Subprogram (CEP). While EOA targets improvements in compliance with building or appliance efficiency regulations and development of compliance infrastructure, CEP supports local government process improvement. Compliance improvement in buildings is achieved through education, training, and other activities targeting building departments and other building industry actors responsible for compliance. Activities may include development of “tools” and other elements of infrastructure that serve multiple compliance enhancement objectives. Improvements in

compliance with appliance efficiency regulations are achieved through communications, outreach, and other activities targeting manufacturers, retailers, and other California suppliers.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CS-3	PGE21073	Number of role-based, Title 24, training sessions delivered.	2a

Progress towards meeting program metric goals

PPM results for Codes and Standards is reported on a statewide basis. In 2012, the statewide IOU team delivered 79 role-based training sessions.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

CODES AND STANDARDS – Reach Codes – PGE21075

The Codes and Standards Reach Codes subprogram provides technical support to local governments that wish to adopt ordinances that exceed statewide Title 24 minimum energy efficiency requirements for new buildings, additions, or alterations.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
CS-4	PGE21075	Number of jurisdictions in IOU Service territories with CEC approved Reach Codes in residential and/or commercial sectors as a result of the RC sub-program activities.	2b

Progress towards meeting program metric goals

PPM results for Codes and Standards are reported on a statewide basis.

CS-4: In 2012, the IOUs continued to provide support for local governments through cost effectiveness studies, review of ordinances, and process support. By the end of the program cycle, 34 local governments adopted Reach Codes and completed the required CEC approval process. Local government reach codes were typically based on a percent above state building code.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

RESIDENTIAL AND COMMERCIAL HVAC – PGE2106

PG&E's 2010-2012 Statewide Residential and Commercial HVAC Program included a comprehensive set of downstream, midstream, and upstream strategies that built on existing program, education, and marketing efforts and leveraged relationships within the HVAC industry to begin to transform the market towards a sustainable, quality driven market. Market

transformation and direct energy savings and demand reductions are achieved through a series of six sub-programs that make up the comprehensive program approach.

HVAC – Upstream – PGE21061

The Upstream HVAC Program offers incentives to distributors who sell qualifying high-efficiency commercial HVAC equipment to increase the regional stocking and promotion of such equipment.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
HVAC-1.1	PGE21061	a) KW/ton incentivized in the program. (Note: Decrease in metric indicates positive progress), combined with	2a
HVAC-1.2	PGE21061	b) the number of units that are incentivized in the program vs.	2a
HVAC-1.3	PGE21061	c) the number of units over 5.4 tons shipped to California as tracked by AHRI shipment data (assuming the availability of AHRI data).	2a
HVAC-2	PGE21061	<p>The distributor stocking percentage of units eligible for program. (Note: Assumes availability of individual distributor data and/or aggregated data from HARDI.)¹</p> <p>¹ The availability of this data is not yet confirmed, since it is closely-held, proprietary third-party information. The IOU team is in discussions with AHRI about obtaining this data and to ascertain the statistical validity of what data would be provided; the IOU team will communicate with the ED about any issues regarding this data element before the first reporting period in Q1 2011 for 2010 information.</p>	2b

Progress towards meeting program metric goals

HVAC-1: PG&E's 2012 PPM metric data shows significant improvement over the 2010 baseline. PG&E's program reported a total of 59,201 tons in 2012, a 84% increase in two years compared with 32,214 tons in 2010. The increase was 31% year over year with 45,069 tons in 2011. The tonnage reported represents 4,619 gross kW resulting in 0.078 kW/ton for the 2012 metric, compared with 0.076 kW/ton for the PY 2010 metric and compared with 0.090 in 2011. Private AHRI (national HVAC manufacturers association) shipment data has not been made available.

HVAC-2: AHRI/HARDI data on distributor stocking percentages was not made available to the IOUs, but the IOU-Energy Division collaboration through the HVAC EM&V Project Collaboration Group is leading to data collection for this metric via the 2010-2012 EM&V Impact evaluation that is expected to be completed in 2013.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

The continued economic improvement from 2011 to 2012 has helped improve the program results year-to-year, since HVAC system sales require significant capital expense.

HVAC – Residential ENERGY STAR® Quality Installation – PGE21064

The Residential ENERGY STAR® Quality Installation Program addresses residential installation practices to ensure that equipment is installed and commissioned per industry standards.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
HVAC-3	PGE21064	Percent of HVAC contracting companies that are participating in statewide residential QI program as a share of the targeted market.	2a
HVAC-4	PGE21064	Average percentage of “certified” HVAC technicians within each contracting company that participates in the residential QI program.	2b

Progress towards meeting program metric goals

HVAC-3: PG&E’s program in 2012 had a total of 6 trained and participating contractors, a ramp down from 19 in 2011 and 55 in 2010, due to the focus in 2011 and 2012 on a redesign and relaunch of this program. Also in 2012, PG&E continued to focus on the post-redesign ramping of the Residential Quality Maintenance (QM) program, which provides the necessary foundation for building the customer-contractor relationships expected by the HVAC industry standards and important for long-term market transformation of the HVAC installation and maintenance services market. The population of C-20 HVAC licensed contractors servicing PG&E territory, based on data from the California State licensing Board is 644. Therefore participating contractors are 0.93% of the eligible population.

Another focus in 2012 was to work closely on additional program enhancements and market transformation with the staff of Air-Conditioning Contractors of America (ACCA), the leading HVAC industry association for contractors. In order to lay the market transformational groundwork, PG&E collaborated with ACCA staff on design details of a new Quality Assured Contractors program for existing homes, called the ACCA Residential Service and Installation (RSI) program launched in February, 2013.

HVAC-4: Contractors that participate in PG&E’s Residential QI program are required to first participate in PG&E’s Residential QM program. Eligibility criteria for the QM program includes a minimum of one certified technician, and estimates an average of seven total technicians per participating contractor. PG&E has not yet developed a method to track the total number of certified or total technicians within contractors participating in the program. Based on the program minimum qualification level, PG&E conservatively estimates that “certified” technicians represent 14% of total technicians within participating contractors.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

Based on the following program challenges, and with the concurrence of the Statewide IOU HVAC team and Energy Division staff, PG&E continues to pursue a program design that takes a different approach to the Residential HVAC Quality Installation (QI) Subprogram in order to find an approach that can drive the desired market transformation called for in the California EE Strategic Plan.

- The current environment is such that customers run HVAC equipment to failure and are not aware of HVAC industry standards. It is necessary to first establish a trusted

relationship between the contractor and customer in order to engage the customer in a quality installation discussion prior to a run to failure scenario.

- SCE's QI program experience has identified concerns over the sustainability of the program over the long-term based on the high cost of implementing and maintaining the program.
- PG&E's experience from designing and implementing the companion Residential HVAC Quality Maintenance Subprogram provided insight to the costs and challenges of implementing HVAC industry standards as well as confirmed the need for contractors to build relationships with their customers.
- ENERGY STAR® Residential QI (ESQI) program analysis performed by PG&E confirmed SCE's experience in that the high cost and minimal market penetration results in a TRC of 0.11 or lower given current cost effectiveness protocols.

PG&E's program implements a modified approach to the program focused on Residential HVAC Quality Installation Contractor Education and Customer Awareness. PG&E's alternative approach to market transformation is focused on reaching a broad base of HVAC contractors and customers via expanded contractor education and tool incentives and focused customer awareness. PG&E's approach in 2012 consisted of the following:

- Increasing the number of introductory ACCA QI training sessions for contractors by 50 percent.
- Providing contractor incentives for ACCA QI software and tools ensuring contractors have the necessary toolset to deliver standards-based QI. Driving customer awareness through holistic QI/QM messaging using the QM subprogram as the delivery channel.

And now that ACCA has launched its RSI program, discussed above, which includes a field verification approach that appears to be able to be done with less implementation cost than the ESQI program design, PG&E is exploring the integration of RSI into its QI offering in PG&E service territory.

HVAC – Commercial Quality Installation – PGE21063

The HVAC Commercial Quality Installation Program addresses commercial installation practices to ensure that equipment is installed and commissioned per industry standards.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
HVAC-5	PGE21063	Percent of HVAC contracting companies that are participating in statewide commercial QI program as a share of the targeted market.	2a
HVAC-6	PGE21063	Average percentage of "certified" HVAC technicians within each contracting company that participates in the commercial QI program.	2b

Progress towards meeting program metric goals

HVAC-5: PG&E's program in 2012 had a total of 3 trained and participating contractor, up from 1 in 2011. In 2012, PG&E designed and launched a Commercial HVAC Quality Installation Contractor Education and Customer Awareness program design, similar to its Residential QI program, and another continuing focus in 2012 was on the ramp of the Commercial Quality Maintenance (QM) program, which provides the necessary foundation for building the customer-contractor relationships expected by the HVAC industry standards and important for long-term market transformation of the HVAC installation and maintenance services market. The population of C-20 HVAC licensed contractors servicing PG&E territory, based on data from the

California State licensing Board is 644. Therefore participating contractors are 0.47% of the eligible population.

HVAC-6: Contractors that participate in PG&E's Commercial QI program are required to first participate in PG&E's Commercial QM program. Eligibility criteria for the QM program includes a minimum of three certified technicians, and estimates an average of 10 total technicians per participating contractor. PG&E has not yet developed a method to track the total number of certified or total technicians within contractors participating in the program. Based on the program minimum qualification level, PG&E conservatively estimates that "certified" technicians represent 30% of total technicians within participating contractors.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

PG&E is working with the Statewide IOU HVAC Team, Energy Division, and industry stakeholders in the Western HVAC Performance Alliance to finalize plans for a re-design of the program that would best drive the desired market transformation called for in the CA EE Strategic Plan. In 2012, PG&E designed and launched a Commercial HVAC Quality Installation Contractor Education and Customer Awareness program design, similar to its Residential QI program.

Additionally, the collaboration with the ACCA staff mentioned above for HVAC-3 applies to small Commercial packaged equipment, so the market transformational groundwork has been done for the HVAC industry itself to also ensure that Quality Installation standards can be verified in the field in a sustainable fashion for Commercial HVAC as well.

HVAC – Quality Maintenance Development – PGE21065

The HVAC Quality Maintenance Development Program addresses residential and commercial maintenance practices to ensure that equipment is serviced per industry standards and that the maintenance effort supports the long term strategic goal of transforming the trade from commodity-based to quality-based.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
HVAC-7	PGE21065	Measured progress towards specific milestones provided in the project GANTT chart indicating the development/finalization of this IOU program based on Quality Maintenance standards.	2a

Progress towards meeting program metric goals

HVAC-7: This metric was met in 2011, when the development and launch of re-designs of both the commercial and residential offerings of the QM program were completed. Contractor and customer participation continued to ramp up in 2012 and into the 2013-14 transition cycle. See attached Excel file "TABLE HVAC-7_PGE.xlsx" for PG&E completed launch plan from 2011.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

HVAC – Technology and Systems Diagnostics – PGE21062

The program is a coordination and advocacy program that addresses the technical elements critical to increasing the market introduction of advanced cooling and fault detection and diagnostic technologies.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
HVAC-8	PGE21062	Status of progress towards completion of roadmap (i.e., plan and recommendations) to support the development of a national standard diagnostic protocol (activities, concrete actions taken).	2a

Progress towards meeting program metric goals

HVAC-8: This PPM was completed in 2012. The Automated Fault Detection Subcommittee of Western HVAC Performance Alliance's Technology Committee, was established in 2010 to spearhead this effort. This committee has met several times on a regular schedule and brainstormed items that needed to be on the roadmap to support the development of a national standard diagnostic protocol. The roadmap, titled "Onboard and In-Field Fault Detection and Diagnostics—Industry Roadmap" was finalized by this committee in 2012. The roadmap includes strategies and timelines to address gaps, barriers, lack of standards and protocols. Several initiatives that were identified in the roadmap are currently underway, including efforts with industry, researchers, utilities and regulatory bodies. Research was conducted by the Statewide HVAC team on laboratory test methods for fault detection and diagnostics (FDD), FDD performance, and fault impacts in residential HVAC units. A 2013 Title 24 Codes & Standards Enhancement Study was successfully submitted to the California Energy Commission resulting in FDD for economizers being required by code. Please see attached Excel file "HVAC-8_Statewide.xlsx" for statewide progress.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

HVAC – Workforce Education & Training – PGE21066

The HVAC Workforce Education and Training (HVAC WE&T) Program offers education and training opportunities targeted at all levels of the HVAC value chain to close training gaps at all levels of the industry.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
HVAC-9	PGE21066	Status of progress towards completion (activities, concrete actions taken) of detailed WE&T roadmap (plans, goals, timelines and recommendations).	2a

Progress towards meeting program metric goals

HVAC-9: In 2012, program staff continued to work collaboratively with other IOU partners and industry stakeholders (largely through the WHPA) to pursue CLTEESP objectives. Strategic actions taken were cross-purposed, informed by industry needs, workforce development

research, and by IOU HVAC & WE&T PIPs (objectives articulated in multiple referenced documents –i.e. HVAC Action Plan, Needs Assessment, Guidance Decision.)

WE&T staff worked closely with program implementation providers to ensure succinct, applicable, and measurable training that was built on industry standards and supported program goals. WE&T staff cultivated partnerships with industry stakeholders (i.e. WE&T providers and Certification Bodies) to elevate skills of existing workforce, and collaborated with workforce development organizations to provide outreach opportunities to K-12, under-represented groups, and veteran organizations.

Please review the GANTT chart in the attached Excel file “TABLE HVAC-9_Statewide.xlsx” for further statewide detail.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES – PGE2108

The statewide Emerging Technologies Program (ETP) is designed to support increased energy efficiency market demand and technology supply (the term supply encompasses the breadth, depth, and efficacy of product offerings) by contributing to the development and deployment of new and underutilized measures—including technologies, practices, and tools—and by facilitating their adoption as measures supporting California’s aggressive energy and demand savings goals.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-1	PGE2108	The number of new "proven" ET measures adopted* into the EE Portfolio. * “Adoption” means measure is available to end-use customers through IOU programs. Adoption of a measure may be attributed to one or more ET sub-programs	2b
ET-2	PGE2108	Potential energy impacts* (energy savings and demand reduction) of the adopted ET measures into the EE portfolio. * Potential energy impacts to be reported based on ET project findings and estimated market potential (reported through quarterly ET database updates)	2b

Progress towards meeting program metric goals

ET-1: Nineteen (19) ET projects during the 2010-2012 cycle were transferred and adopted into EE measures. One adopted measure typically results in multiple unique EE measures in the EE portfolio.

ET-2: See PG&E’s ET database provided to the Energy Division on April 8, 2013, in response to data request EEGA 2738. Information on savings by ETP measures identified for the 2010-2012 program cycle are also provided in PG&E’s response to PPM CIA-9 (see attached Excel file “CIA-9_PGE.xlsx”).

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES – Technology Assessments (TA) - PGE21081

Through the Technology Assessment subprogram, energy-efficient measures that are new to the market (or underutilized for a given application) are evaluated for performance claims and overall effectiveness in reducing energy consumption and peak demand.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-3	PGE21081	<p>Number of ETP measures which have undergone TA that are adopted* into the EE portfolio, including but not limited to each of the following:</p> <ul style="list-style-type: none"> (a) Advance HVAC technologies (b) High efficiency plug loads and appliances (c) Advanced lighting technologies <p>* “Adoption” means measure is available to end-use customers through IOU programs.</p>	2b

Progress towards meeting program metric goals

ET-3: During the 2010-2012 cycle, nine (9) ETP Technology Assessment projects were transferred and adopted into EE Measures as follows:

- a) One Advanced HVAC technology
- b) Four High efficiency plug loads and appliances
- c) Four Advanced lighting technologies

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES – Scaled Field Placement (SFP) - PGE21082

The Scaled Field Placement (SFP) projects consist of placing a number of measures at customer sites as a key step to gain market traction and possibly gain market feedback. Typically, these measures have already undergone an assessment or similar evaluation to reduce risk of failure.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-4	PGE21082	<p>Number of ETP measures that have undergone SFP and are adopted* into the EE portfolio.</p> <p>* “Adoption” means measure is available to end-use customers through IOU programs.</p>	2b

Progress towards meeting program metric goals

ET-4: During the 2010-2012 cycle, five (5) Emerging Technology Scaled Field Placement projects were transferred and adopted into EE measures.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES – Demonstration Showcases (DS) - PGE21083

The Demonstration Showcase element is designed to provide key stakeholders the opportunity to "kick the tires" on proven combinations of measures that advance ZNE goals. DS are awareness-generating projects that may expose EE measures on a systems level to stakeholders, whether the general public or a targeted audience, in real-world settings, thus creating broad public and technical community exposure and increased market knowledge. These potentially large-scale projects expose measures to various stakeholders using real-world applications and installations. Key attributes of DS are that they are open to the public and/or stakeholders and highlight a systems approach rather than an individual approach.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-5	PGE21083	Self-reported increase in knowledge by randomly selected sample of targeted stakeholders who either 1) visited the DS or 2) were informed about the DS in a workshop about benefits of the DS.	2b

Progress towards meeting program metric goals

ET-5: Results from the demonstration showcase surveys will be gathered during Phase 2 of the program evaluation, currently under way in Q2 2013. No demonstration showcase projects had completed the dissemination efforts, so stakeholders were not ready to be surveyed. Surveys can be conducted once dissemination efforts have been completed.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES – Market and Behavioral Studies - PGE21084

The Market and Behavioral Studies Program is designed to perform targeted research on customer behavior, decision making, and market behavior to gain a qualitative and quantitative understanding of customer perceptions, customer acceptance of new measures, and market readiness and potential for new measures.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-6	PGE21084	Self-reported increased in knowledge among internal ET stakeholders about the technologies targeted by the M&B studies.	2b

Progress towards meeting program metric goals

ET-6: In Phase 1 of the ETP Process Evaluation and Market Assessment, seven internal stakeholders were surveyed about the 11 MBS subprogram reports that were completed at that time. Based on responses (questions 2-5 only), their self-reported increase in knowledge on a scale of 1 to 5 was 3.3 (between 3-neutral and 4-agree).

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES – Technology Development Support (TDS) – PGE21085

The Technology Development Support program (TDS) is designed to allow the ET program the opportunity to lend assistance to private industry in the development of technologies. Although product development is the domain of private industry, there are opportunities where IOUs are well qualified (or in a strong position) to undertake targeted, cost-effective activities that provide value in support of private industry product development efforts. This support increases market readiness, decreases innovator uncertainties, and allows the ET program to have input. The ET program looks for targeted opportunities to support EE product development.³ Product development is the process of taking an early-stage technology, or concept, and transforming it into a saleable product.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-7	PGE21085	Number of new performance specifications and/or Use Cases* produced as a result of TDS sub-program. * “Use Cases” describe the need for a technology or application.	2b
ET-8	PGE21085	Number of new performance specifications and/or Use Cases presented to manufacturers/private industry for possible action.* * “Possible action” means that the manufacturer/private industry considered TDS results in their product development efforts.	2b

³ Product development is the process of taking an early-stage technology or concept and transforming it into a saleable product.

Progress towards meeting program metric goals

ET-7 and ET-8: Three performance specifications and two use cases came from the TDS subprogram.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES- Technology Resource Incubation and Outreach – PGE21086

The Technology Resource Incubator Outreach (TRIO) is a statewide program that provides support and networking for EE and demand response entrepreneurs, investors, and universities with the goal of providing participants the necessary perspective and tools to work with IOUs and ultimately introduce new EE measures to the marketplace. TRIO helps to accelerate the successful development of technologies through an array of engineering support, resources and services, all of which are developed and orchestrated by TRIO and offered both through TRIO and its network of contacts.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-9	PGE21086	Percent of attendees who voluntarily respond and self-report increased understanding on how to do business with utilities.	2b

Progress towards meeting program metric goals

ET-9: All TRIO attendees, or 100%, who voluntarily responded, self-reported an increased understanding on how to do business with utilities.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

EMERGING TECHNOLOGIES – Technology and Testing Center (TTC)

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
ET-10	N/A	Number of ETP measures evaluated at the TTCs in support of ET Assessments Sub-Program that are adopted* into the EE portfolio (and/or available in the market). * “Adoption” means measure is available to end-use customers through IOU programs.	2b

N/A - This PPM for SCE's Center is not applicable to PG&E.

INTEGRATED DEMAND-SIDE MANAGEMENT (IDSM) – PGE2111

The California Long Term Energy Efficiency Strategic Plan (Strategic Plan) recognizes the importance of integrating demand-side management options including energy efficiency, demand response, and distributed generation as fundamental to achieving California's strategic energy goals. To support this initiative, the IOUs have identified integrated demand-side management (IDSM) as an important strategic DSM policy priority.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
IDSM-1	PGE2111	Awareness and knowledge among relevant IOU program staff (to be specified – e.g. account reps, engineers that administer the audit (3rd party); program designers and managers) regarding how IDSM relates to and impacts their efforts and programs	2b
IDSM-2	PGE2111	Complete and make available integrated audit or survey tools (on line and on-site) to residential and non-residential customers in all IOU programs that provide audits / surveys (and include EE, Demand Response (DR), and Distributed Generation (DG) recommendations). (Y/N)	2b
IDSM-3	PGE2111	Number and percentage of integrated audits provided to each customer class and NAICS code.	2b
IDSM-4	PGE2111	A status report that identifies how well “integrated” (EE, DR, DG) all IOU demand-side energy program offerings and components are (e.g., CEI, Commercial, Agricultural, Industrial, Residential, Audits) including lessons learned, best practices, improvement plans, and how the program portfolio is addressing strategic planning goals / objectives and D.09-09-047 directives regarding integration, as well as the IDSM program objectives specified in the PPM Worksheet. The report will review how the IOUs have developed internal and external frameworks that support integration of IDSM programs and technologies. (Y/N)	2b
IDSM-5	PGE2111	Number and percent of integrated audit participants (identify NRA participants) in all customer classes (Residential, Commercial, Industrial, Agriculture) that implement recommended DSM measures / participate in other DSM programs (EE, DR, DG – Track which categories implemented / participated in) or other recommended technical process and practice improvements. (If possible, identify whether participants received incentives or not.)* *Data sources for reporting will come from (a) program tracking databases and (b) process evaluation to refine estimates.	2b
IDSM-6	PGE2111	Program participant awareness of IDSM practices in each of the market sector subprograms.	2b

Progress towards meeting program metric goals

IDSM-1:

PG&E has made great strides towards educating PG&E staff on how IDSM relates to and impacts their efforts and programs. These activities include regional sales trainings and program staff trainings. In their Omnibus Report, ITRON agrees that PG&E is achieving a high rate of

success in building knowledge of IDSM and transferring lessons learned and (recommends) that the CPUC should consider using PG&E's model for IDSM training as an example for the other IOUs. Please see Appendix A for full report.

IDSM-2:

The integrated audit / survey tools (Universal Audit Tools – UAT) were completed for both Residential and Non-Residential customers. The Residential tool was completed in March 2012, and the Non-Residential Tool was completed in September 2012.

IDSM-3:

The attached file, "IDSM-3_PGE.xlsx" shows all non-residential integrated audits separated by customer class (Commercial, Industrial, Agriculture) and NAICS code.

Percentages at the NAICS-code level represent the percentage of total integrated audits in a given NAICS code versus the total number of integrated audits for that segment. For example, we conducted 30 integrated audits for commercial multi-tenant offices, which represents 14.56% of the total 206 commercial integrated audits we performed.

Percentages at the segment level represent the number of total eligible customers in a segment versus how many integrated audits we performed for that segment. For instance, we had 658,329 eligible Commercial customers, 206 of which received an integrated audit in 2010-2012, for a percent served of 0.03%.

It is important to note that although "Integrated Audits" are a specifically defined service per PG&E's Non-Residential audit workpaper, Integrated Demand Side Management opportunities are discussed as part of every audit PG&E performs as part of our overall focus on integration. Whether or not those recommendations appear in the report is dependent on customer needs and unique usage situation.

IDSM-4:

PG&E provides a detailed report which illustrates how PG&E has been a leader in integrated efforts in the 2010-2012 EE portfolio period both externally through Statewide leadership and internally through organizational structure, integration of demand side offerings and tools. This report also addresses PG&E's compliance with the strategic planning goals and objectives set forth by the CPUC. Please see Appendix B for report.

IDSM-5:

The attached file, "IDSM-5_PGE.xlsx" shows all integrated audit customer conversion separated by customer class (Residential, Commercial, Industrial, Agriculture). Integrated audit customer conversion is defined as a customer receiving an integrated audit in 2010-2012 followed by the customer taking a database-tracked action in 2010-2012. The data in "IDSM-5_PGE.xlsx" is presented both in terms of integrated audit customer conversion, as well as broken out into specific types of conversion (EE, DR, DG) for more granular measurement of the types of actions customers take after receiving an integrated audit. Therefore, if a customer received an integrated audit, and then pursued both an EE and a DR measure / program, they would be counted for both EE and DR conversion areas. However, integrated audit customer conversion is only measured once per customer. Therefore that same customer who did both EE and DR would only be counted once for the "Integrated Audit Customer Conversion" in columns I and J.

Integrated audit conversion takes time. Audits are an initial step followed by multiple other resources to help the customer implement projects. As a result, many of the 2012 integrated audits, and even some of the 2011 integrated audits, have not yet been converted. Furthermore, audits are used as part of a continuing conversation with a customer on

improvements they can make in line with the loading order, therefore conversion can be expected to be higher for EE then for DR and DG within the 2010-2012 measurement window.

For the Residential segment, integrated audits are only shown for the new Universal Audit Tool, released in March 2012. Given the recent release date of that tool, the majority of the Residential integrated audits have not yet had sufficient time to convert, resulting in conversion percentages that are significantly lower than other segments.

IDSMS-6:

IOU IDSM programs were not expected to result in measureable changes in awareness of external participants in IDSM projects during the formative 2010-2012 program cycle; during the 2010-2012 cycle, the IOUs focused on internal awareness efforts through training and other means. To measure changes in participant awareness during the 2013-2014 program cycle, the IOUs recommend incorporating a customer awareness survey into the IDSM Research Roadmap for the 2013-2014 program cycle. This survey effort will be designed and managed by either the IOUs or Energy Division in order to measure and track participant awareness impacts.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

MARKETING, EDUCATION AND OUTREACH (ME&O) – PGE2110

The purpose of Marketing, Education and Outreach (ME&O) is to increase utility consumer awareness and participation in cost-effective energy-saving activities offered by the utilities, as well as to promote behavior changes that result in energy management efforts that save energy and reduce greenhouse gas (GHG) emissions, in coordination with demand response and renewable self-generation options. To be successful, ME&O must move consumers through a transitional process from awareness and knowledge of energy efficiency to action.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
MEO-1	PGE2110	Awareness and knowledge of key elements of the Engage360 brand among customer groups specifically targeted by grassroots and social networking phase of the program.	2a
MEO-2	PGE2110	Awareness and knowledge of energy efficient actions promoted by the ME&O program among customer groups specifically targeted by grassroots and social networking phase of the program.	2b
MEO-3	PGE2110	The number and type of energy efficient actions self-reported by customer groups specifically targeted by grassroots and social networking phase of the program.	2b

Progress towards meeting program metric goals

The launch of the Engage 360 brand was strategically designed for implementation in two distinct campaign phases: grassroots and mass media. However, the program was put on hold in September 2011 before it was completely launched. Commissioner Ferron's October 13, 2011 Assigned Commissioner's Ruling suspended the program through the end of 2011,

pending further guidance. Therefore, the program did not have an opportunity to impact awareness and knowledge of key elements of the brand in 2011.

The program did not have an opportunity to impact awareness and knowledge for this PPM in 2012 since the program was put on hold October 13, 2011. On May 10, 2012, the Commission issued a guidance decision directing the utilities to discontinue the use of the Engage 360 brand and develop a strategy and budget for transitioning toward the use of Energy Upgrade California as a statewide umbrella brand for energy information and encouraging demand-side management actions by residential and small business consumers. Each utility was asked to file an individual application (A.12-08-007) no later than August 3, 2012 which will determine the objectives and program performance metrics of the program going forward. This proceeding is currently pending a decision which is expected in May or June 2013 and all work towards meeting the program performance metrics remains on hold until the decision is issued.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A

WORKFORCE EDUCATION, AND TRAINING (WE&T) – PGE2109

The Statewide IOU Workforce Education and Training (WE&T) Program represents a portfolio of education, training and workforce development planning and implementation funded by or coordinated with the IOUs. The program's three Sub-Programs are Connections, Centergies, and Strategic Planning. WE&T Connections was the only subprogram to have 2a metrics this reporting cycle and are thus discussed below.

WORKFORCE EDUCATION AND TRAINING – Centergies – PGE21091

The WE&T Centergies subprogram is executed primarily through the eight IOU Energy Centers throughout California. Most Centergies activities revolve around targeted courses, technical consultations, outreach events, and building performance tool loans through various tool lending libraries.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
WET-1	PGE21091	Percent increase in educational collaboration with partners from 2011 baseline. (Tracked and reported by educational level, and by number of partners operating in Title-1 communities.) * Educational "collaboration" is defined as seminars, outreach events and consultations as needed. These collaborations include exchanges of monetary or in-kind support and services (i.e., sharing meeting facilities, marketing/promotional services, etc.).	2b

WET-2	PGE21091	Percent increase in educational collaboration with organizations serving disadvantaged communities * Educational “collaboration” is defined as seminars, outreach events and consultations as needed. These collaborations include exchanges of monetary or in-kind support and services (i.e., sharing meeting facilities, marketing/promotional services, etc.).	2b
WET-3	PGE21091	Number of IDSM educational classes with substantial IDSM (EE, DR, and DG) content. * “Substantial” is defined as approximately 50% or more of class content must address IDSM subject matter	2b

Progress towards meeting program metric goals

WET-1: The Centergies subprogram is tasked with providing education and training opportunities to people in the current workforce and to people who are about to enter the workforce. Therefore, appropriate “educational levels” for Centergies include community colleges, 4-year academic institutions, certification programs, trades education, professional continuing education, programs/classes, and high schools. PG&E had a total of 431 educational collaborations with partners serving these audiences (see Table WET-1_PGE.xlsx). Title-1 community designations are associated with K-12 students and programs, which are not primary target audiences for Centergies subprogram. Therefore, Centergies did not track collaborations within Title-1 communities. However, the Centergies subprogram recognizes that high school students are the next generation of the energy workforce and/or the next generation of energy students, thus its occasional collaboration and service with/to high school students. PG&E’s tracking methods for 2011 and 2012 allowed for a higher level of accuracy for tracking incidences better than tracking number of partnerships. Thus, some of the number of incidences are not directly linked to the number of identified partners.

WET-2: The Centergies subprogram tracked collaborations with organizations representing and serving military veterans, low-income communities, at-risk youths/adults, and minority (under-represented) populations. Centergies also tracks zip codes where courses were offered by the energy centers. These locations were compared to the hard to reach zip code list. PG&E’s tracking methods for 2011 and 2012 allowed for a higher level of accuracy for tracking incidences better than tracking number of partnerships. Thus, some of the number of incidences are not directly linked to the number of identified partners.

WET-3: PG&E’s Energy Centers, including the Pacific Energy Center, the Stockton Training Center—Stockton, and the Food Service Technology Center, delivered 344 courses which included IDSM content.

Description of changes in metrics used and reasons for the change

In 2011, the IOUs and Energy Division agreed that the existing definition of IDSM (noted in the table above) needed to be revised. The definition in the table above was inconsistent with how energy professionals think of “integration.” Furthermore, it was also not feasible to have a perfectly integrated class where each topic (EE, DR, DG) received equal time of 33.3% count as integrated because the stated minimum was 50%. In 2011, through WE&T and IDSM Task Force meetings, the IOUs and Energy Division agreed that course content would be considered integrated if it met one or both of the criteria below. PG&E’s results for PPM WET-3 represent this revised definition of integrated content.

1. Integration through a balance of building systems content

Course content includes material on at least two building systems (i.e. mechanical, building envelope, lighting, solar, water, etc.) their relevance to one another, and how an integrated systems approach optimizes overall demand management with impacts that address energy efficiency, demand response, and smaller renewable energy systems.

2. Integration through technology content

Technologies discussed can be used to fulfill at least two of the three subjects of Integrated Demand Side Management (EE, DR, DG). IDSM technology examples would include dimming ballasts, Energy Management Systems, controls, or any technology with a work paper that includes both kW and kWh savings. Energy efficiency technologies result in permanent load reduction. Demand response technologies have the ability to respond to a demand response event for temporary load reduction. Distributed generation technologies deliver power to an individual building or set of buildings.

Program related or economic changes that impact metric results

PG&E notes that the number of education collaborations reported in WET-1 for program year 2012 (see Table WET-1_PGE.xlsx) were slightly lower than in 2011. PG&E continues to outreach to partners and offer opportunities for collaboration, but has also focused more funding and resources to developing course curriculum to reflect a sector strategy approach, in response to the WE&T Needs Assessment recommendations.

WORKFORCE EDUCATION AND TRAINING – CONNECTIONS – PGE21092

The WE&T Connections Subprogram focuses on energy efficiency curriculum and related activities that inspire interest in energy careers, new and emerging technology, as well as skills to advance the energy initiatives and goals within the K-12 educational sector and provide information to increase awareness of introductory-level community-based training efforts.

PPM ID	Program ID	Program Performance Metric (PPM)	Metric Type
WET-4	PGE21092	Percent increase in educational collaboration with partners. (Tracked and reported by educational level, and by number of partners operating in Title-1 communities.) * Educational “collaboration” is defined as seminars, outreach events and consultations as needed. These collaborations include exchanges of monetary or in-kind support and services (i.e., sharing meeting facilities, marketing/promotional services, etc.).	2b
WET-5	PGE21092	Percent of K-12 WET Connection program participants that are from Title-1 schools	2a
WET-6	PGE21092	Complete baseline study to determine the current number of partnerships. (Y/N)	2a
WET-7	PGE21092	Number of high school continuing education outreach partnerships in WE&T Connection	2a <i>starting in 2011</i>

Program progress towards meeting goals

WET-4: The IOU funded Connections subprograms are tasked with providing educational resources to K-12 level (Energenius, PEAK and Green 360) and at the UC/CSU level (Power Save Green Campus). In 2011, these programs started tracking the collaborations with partners in these education sectors by their respective levels. Through 2012, PG&E programs

had a total of 236 educational collaborations with partners serving these audiences (see Table WET-4_PGE.xlsx).

Example of partnerships in K-12 sector include County Offices of Education, state and local educational organizations, the California Department of Education, Museums, Conservation Corps, YMCA, and the Boys and Girls Club. At the UC/CSU level, partnerships included the Office of the President, California State Chancellor's Office and technology centers. PG&E notes that the Connections' partnerships reported for WET-4 do not include Community College collaborations, which are reported through the Centergies subprogram in their WET-1 reporting.

WET-5: In 2012, PG&E obtained direct contact information and completed a targeted mailing for the Energenius program to 18,485 teachers where 67% of the teachers were from Title 1 schools. Of the 825 public schools that ordered these materials, 536 or 64% were Title 1 schools. Of the 99,487 students receiving these educational materials, 63% of these students were from Title 1 schools. The total number of K-12 schools participating in PG&E's Connections programs was 950, of which 603 were Title 1 schools.

New curriculum program developed in 2012 included; a "Green Careers Resource Guide" for high school counselors, teachers, career advisors and other educators who want to introduce students to the world of green jobs and careers; "Water, Energy and the Environment" for grades 4-6; and "We Saved Energy Today" for preschools. New programs under development in 2013 include "Smart Energy Technologies" and "Renewables and Nonrenewable Energy Sources".

WET-6: As required by the PPM, PG&E completed a survey of the current number of partnerships in 2010 to establish a baseline for 2011 and for 2012 metric reporting.

WET-7: PG&E had 26 post-high school continuing education partnerships in 2012. Partnerships are defined as an organization, agency, unions, non-profits that provide energy efficiency related education and training for post-high school young adults. They are also groups that include education and training for minority and low income participants. At the end of 2012, PG&E had partnerships with 15 Community Colleges and 4 community based organizations under PG&E's PowerPathway® Training Network for Energy Efficiency and Renewables Program. Additionally PG&E partnered with 7 PowerSave Green Campus campuses, as they are bringing student resources to their local community.

In addition, PG&E launched the Education Sector Strategy initiative in 2012, which is the platform going forward that will build partners within the PG&E service area to support the post-high school community.

Description of changes in metrics used and reasons for the change

N/A

Program related or economic changes that impact metric results

N/A